DOCUMENT RESUME

ED 101 359 CS 201 813

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TITLE The Development of a Model for the Systematic Teaching of the Writing of Poetry. Final Report.
INSTITUTION Utah Univ., Salt Lake City. Bureau of Educational Research.
SPONS AGENCY National Center for Educational Research and Development (DHEW/OE), Washington, D.C. Regional Research Program.
BUREAU NO BR-0-H-004
PUB DATE Aug 71
GRANT OEG-8-70-0001(058)
NOTE 230p.

EDRS PRICE MF-$0.76 HC-$12.05 PLUS POSTAGE
DESCRIPTORS Computer Assisted Instruction; Course Content; Course Descriptions; *Creative Writing; Curriculum Guides; *Poetry; *Program Development; *Programed Materials; Programed Units; Program Evaluation; *Teaching Models

ABSTRACT

The three major purposes of this project were to develop a programed text for teaching the writing of poetry, to validate the program, and to prepare a procedural guide for programing. A 156-frame program was developed, including procedures for: eliciting free written expression to serve as subject matter for poems; writing initial poems to fit Haiku and Tanka forms; revision of poems based on author and reader analysis; writing poetry using a variety of poetic devices; writing to fit various rhyme, meter, and stanza forms; and revising for greater poetic effect. A procedural guide for the development of programed materials is outlined in 11 steps including specification of objectives, assessment of performance, determination of causes of performance deficiencies, design of appropriate systems (instructional, guidance, feedback, incentive, management) to eliminate deficiencies, and validation of those systems. Developmental and validational testing resulted in significant changes in program design. Recommendations are made for further work including determination of multiple cutoff scores for predicting mastery in the program and use of the computer as an aid in poetic composition. (Author/TS)

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Final Report

Project No. O-H-004
Grant No. OEG-8-70-0001 (058)

THE DEVELOPMENT OF A MODEL FOR THE SYSTEMATIC TEACHING OF THE WRITING OF POETRY

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August 1971

The research reported herein was performed pursuant to a grant with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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Regional Research Program

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PREFACE

This project had three major purposes: to design and develop a programmed text that teaches the writing of poetry, to gather some developmental and validational data on the product and to specify some procedures for development of this type of material. Some progress has been made toward all three of these generally stated objectives. The version of the programmed text available at the present time (our Model T) is presented in Appendix 2. The developmental process and preliminary validational data are presented in Chapter One and Chapter Two. Chapter Two presents the major linguistic analysis that went into our examination of metaphor and Chapter One presents outcomes and conclusions in the total program development process. Procedures for preparing course materials of this sort are presented in Chapter Three.

The most important of the specific findings and products that are outcomes of this study is the direction it has given us for further study. This is presented in Chapter Four--Summary and Conclusions. It is that section which gives direction to our developing designs for Model T+1, T+2, etc. for the program on writing poetry.

This program was developed in part under a grant from the Regional Small Contract Research Program of the U. S. Office of Education. Project Director is Gabriel Della-Piana.

A number of people have contributed significantly to the development of the program. Joe E. Kirk, poet, helped in selection of supportive material and in conceptualizing the early design. Diana Allen and James Tanner contributed to the linguistic analysis that provided the necessary foundation for the teaching of the use of poetic devices. Leroy K. Johnson selected the Haiku and Tanka used, and conducted tryouts of material. Greg Christensen experimented with procedures for eliciting free written responses. Marcus Smith did considerable rewriting and organization of the final version of the program. Sister Rose Clare conducted a search of literature for ideas on the teaching of poetry. Everett Murdock suggested the games used in the sections on "living" poetry: Haiku and "living" poetry: Tanka. Many others have been helpful by virtue of their own work in this field including Professor Geraldine LaRocque of Columbia University, Professor Les Whipp and William O. Hendricks of the University of Nebraska. The data analysis of Chapter Two was under the able direction of George Endo who used Susu Knight for developing scoring keys and numerous others for scoring and analysis. The exciting collage used as a stimulus for writing was prepared by Gail Della-Piana and her art class. The Project Director is grateful to all these people, others who have helped, and to the teachers and students who cooperated in tryouts. While the influence of all these people has had its impact, any deficiencies

in the production must be those of the Project Director since no one contributor had an opportunity to shape the products exactly the way he would have liked to.

Gabriel Della-Piana
Salt Lake City, Utah
August 24, 1971

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CHAPTER 1

PROGRAM DEVELOPMENT AND VALIDATION

This chapter presents a case history of the program development and validation up to this point. The path has been circuitous and serendipitous. We are not at the end and yet we have discovered things we never would have supposed. The development is discussed in three phases. Phase One: Preliminary Design and Explorations, Phase Two: First Generation Program, and Phase Three: Second Generation Program.

Phase One: Preliminary Design

In the first phase of development we proceeded along the lines of development of programmed materials for teaching poetry without the aid of subject matter experts (e.g., in linguistics, literature or poetry) although we did use poets (writers) as consultants and of course used the most valuable consultants of all, the learners. This phase included six steps.

Step One.--We tried to specify the content domain, the behavioral objectives and criterion test. The target group was junior high school. The initial behaviors of interest were based on personal experience and conversations with poets. There were three preliminary objectives: 1) fluent production of ideas and phrases that made the writer laugh, cry, be angry or afraid, get excited, feel alone or not alone, etc., 2) Recognition of creative expression in his own writing, 3) Transformation of ideas and phrases into more poetic expression. These behaviors were recognized as only precursive to the ultimate criterion of "creative written language expression" which we assumed we could not directly teach. A taxonomy of educational objectives was used to generate specific objectives and test items. Following the Bloom Taxonomy of Educational Objectives (1956) the following objectives were derived:

1. Knowledge (written recall and/or recognition) of definitions and examples of metaphor, alliteration, onomatopoeia, assonance and hyperbole.

2. Comprehension (ability to put into one's own words or into a lower level of abstraction) of metaphor produced by oneself or others.

3. Analysis (ability to discriminate and label) of instances of metaphor, alliteration, onomatopoeia, assonance, hyperbole and combinations of these.

4. Synthesis (putting together of elements in some unique form) of fluent verbal production of ideas and phrases of high association value and significance and stylistic transformation of ideas and phrases into poetic forms.

We designed a criterion test to assess the presence of the desired behaviors and used the criterion test to assess the performance of a representative sample (N = 5 to 20) of the target population to determine how much of the desired performance is present. The information gained led to revisions of objectives and criterion test as described in Step two.

Step Two.--Our first test tryout was on four boys: one eighth grader and three sixth graders. Under conditions of high motivation (the boys were paid one dollar each for 1 to 1-1/2 hours work on the test) the boys worked at a steady rate on the task. Thus motivation was not likely a condition accounting for response deficits. Likewise there appeared no evidence of competing responses interfering with performance. The problems appear to be training problems of two types. Some responses are not in the Ss repertoire (e.g., giving definitions and examples of metaphor, alliteration, etc.) and some are there but not under the control of certain stimuli (e.g., some Ss use poetic devices such as assonance, metaphor and alliteration, but cannot label them such nor produce them on command under the stimulus of the name of the device).

Step Three.--A behavioral analysis and instructional sequencing was carried out based on the tryout, the program objectives were delimited, the objectives and criterion test were revised, a tentative sequence was developed, and rules and examples of the content of instruction were collected. That material follows:

Objectives:

The major objective will be the development of skill in the use of metaphor in writing. The specific behaviors relevant to this objective are presented below.

1. Given five minutes for free writing, to produce a rate of different words and total words to reach the criterion of 30 words per minute and 80% of words not redundant. (Note: On a tryout of the criterion test the average word production was 6 per minute and 90% of words were non-redundant.)

2. Recognize words or phrases from one's own writing (as in #1) with high association value or meaning to oneself. To be able to pick out three high association phrases.

3. Transformation of one's own words and phrases into metaphor with a context that makes the metaphor happen. To make formally or technically correct metaphors (100/100) and have a judged rank on an absolute scale of 6 or better (100/75).

4. To write a metaphor which is a transformation of one's own words or phrases (100/100). (Student's criterion test will be used for selection of his own words or phrases.)

5. To write a metaphor given a cliche in the form of a simile and complete the metaphor by adding context (100/100).

6. To complete a metaphor by adding context which makes it happen (100/100).

7. To identify metaphors where the context makes the implicit comparison "happen" emotionally or in terms of imagery (100/100).

8. To identify metaphors when presented alone or with similes, hyperbole, and alliteration (100/100).

Criterion Test:

Items in criterion test are numbered to correspond with objectives. Items must be administered in the order listed with no opportunity to look ahead.

1. Write down anything that comes to mind without concerning yourself with grammar, spelling or content. You may change subjects as you go along. Just write and let one thing suggest another to you. Write as much as you can. You will have 5 minutes. I will tell you when time is up.

2. Go back over the material you wrote above. Underline expressions which you like very much and have a lot of meaning for you. Circle ideas which may not be particularly well stated but which mean a lot to you.

3. Write down three of the phrases or ideas which you underlined or circled and label them 1, 2 and 3 leaving a space under each. In the space write a transformation of your idea or phrase into a metaphor. Add the context that "makes the metaphor happen." That is, add two or three lines which make the idea of the metaphor get across to the reader emotionally or in terms of imagery.

4. Item three assesses the behavior specified in objectives three and four.

5. Rewrite the following cliches in the form of a metaphor and add a context of 2 or 3 lines to make the metaphor happen for the reader.

   - He is like an open book.
   - He is as bright as the sun.
   - She is happy as a lark.
   - She was as cool as a cucumber.
   - He was as tired as sin.

6. Complete the following metaphors by adding lines of context (2 or 3) which make the idea of the metaphor happen vividly so the reader can experience it.

   - A bed is a boat.
   - Salesmen are shining suns.
   - Mothers are oysters.
   - Ice cream is female.
   - Our doubts are enemies.

7. In each of the following pairs of verses, choose the one in which the second and third lines make the metaphor happen or seem more real.

   a. (1) beds are boats
   floating on moats
   and never getting anywhere.

   (2) beds are boats
   circling moats
   charming castles.

   b. (1) salesmen are shining suns
   who smiling
   blind and burn you.

   (2) salesmen are shining suns
   of b(usinessmen)
   who make the market move.

   c. (1) mothers are oysters
   or mothers are clams
   and boys are the diggers of dams.

   (2) mothers are oysters
   who cling to old barges
   believing that story about pearls.

8. In each of the following check the alternative which is a metaphor. If none of the alternatives are metaphors, do not check any. If more than one is a metaphor, check both.

   a. (1) her hand was ice
      (2) her hand was cold

   b. (1) O my love is like a melody
      (2) clouds are the white birds of heaven

   c. (1) the stars were diamonds
      (2) her smiles are roses in the snow

   d. (1) children are gay songs
      (2) tobacco is like love

   e. (1) she wept for a thousand days
      (2) he shook like an earthquake

   f. (1) bright as the sun, her eyes the gazers strike
      (2) the leaves crackle and cringe in the waning winds

Behavior Analysis and Instructional Sequencing:

1. The tentative sequence for instruction based on principles of chaining and discrimination learning is described below:

   a. A chain is a sequence of responses where each response is the stimulus for the next one. Thus, go through the chain of behavior represented in making the final criterion response and reconstruct the sequence of responses to form a chain. (In the case above, objectives 1, 2 and 3 form such a chain.)

   b. Instruction should begin with the last item in the chain (in this case item #3). However, instruction should proceed through the principle of successive approximations so that each step in the chain may need to be broken down into smaller responses. Thus, item 3 has been broken down into a chain consisting of items 4, 5, 6, 7 and 8. The units of behavioral analysis which guided that breakdown are described in the following items.

   c. Discriminations to be learned. A discriminative response is one which is made differently depending on the stimulus; i.e., one response is made in the presence of one kind of stimulus and a different one in the presence of other kinds.

In our case there are two kinds of discriminations to be learned. (1) The identification of a metaphor as distinct from other poetic devices. (If one writes metaphors, one must be able to judge after writing whether or not it is one.) (2) The identification of the kind of context which makes a metaphor happen as opposed to that which doesn't. (There are no right answers one can look up. Thus, the writer must be able to discriminate good writing so he can judge his own work. The use of context often makes the difference in metaphor as poetry and metaphor as technically correct.)

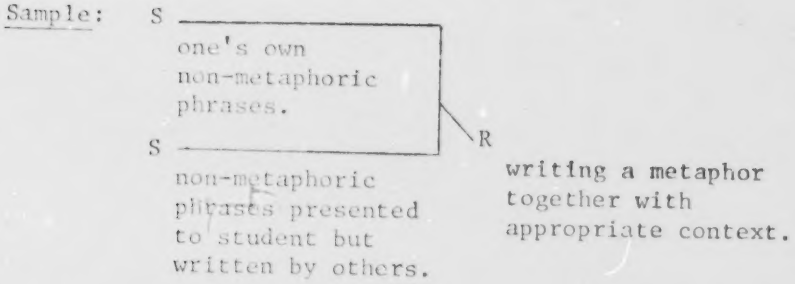
Sample: S metaphor ⟶ R label as metaphor
S simile ⟶ R label as non-metaphor
S hyperbole ⟶ R label as non-metaphor
S alliteration ⟶ R label as non-metaphor

Objectives 7 and 8 are "discriminative responses" which are elements of the more complex behavior in objective 3.

Another principle in teaching discriminations is to present them in pairs beginning with the easiest discriminations. The easiest discriminations are metaphors versus non-metaphors and within that alliteration easiest, hyperbole next, and simile last.

d. Generalizations to be learned. A generalized response is making the same kind of response to different stimuli of the same class. A common error of instruction is to teach a response so that is is highly specific to the stimuli present during instruction and to use instructional stimuli not representative of the situations in which the response is finally to be used; i.e., the final criterion behavior situation (in our case objective 3).

The major generalization of response to be learned is that the behavior of writing a metaphor should be producible not only with transformations of phrases presented to the student in the text but also with phrases which the student himself produced and identifies. In addition, however, one must here too move from the simple to the complex which in this case means moving from transforming a given metaphor by adding context, then transforming a given cliche by making it a metaphor and adding context, then transforming one's own phrases (from previous writing) into a metaphor, etc.



e. The final sequence. Actually the final sequence may change based on a tryout. The one proposed here is based on the programer going through the behavior himself, using the elements of behavioral analysis to guide the definition of elements and their sequencing, reading the reports of poets as to how they produced their work, studying texts on poetic devices, and even trying out SNAP programing. The instructional sequence is objectives 8, 7, 6, 5, 4, 3, 2, 1, in that order.

2. Determine which components of the chain you intend to teach (i.e., which are to be learned) and which you don't expect the student to learn but will simply elicit as you need them with a prompting or guidance system (i.e., instructions like those on an assembly line audio-visual display unit). In our case all the responses listed in the behaviors will be taught. We have omitted "definitions" which were present in an earlier version and will use them as needed by presentation to student. Also, when we get to the larger unit we will include behaviors of selecting a verse form (sonnet, free verse, blank verse, nonce stanza) and selecting a scansion pattern (e.g., iambic pentameter). While we will teach criteria for choosing a pattern we will not require recall of the pattern; a page of sample patterns will always be available to direct the student because we feel it is inefficient or unnecessary to teach it.

3. List all the RULES (RU^S) relevant to the instructional sequence. RU^S are statements of some generality (procedure, definitions, etc.) of which there are specific instances or examples. These RU^S may be generated by study of texts and our experience. The following RU^S have been collected for the proposed program.

   a. Metaphor is a statement expressing a relation between things alike in some ways but unlike in others without using the word <u>like</u> or <u>as</u>.

   b. When the context of a metaphor (the lines which precede and follow it) makes the implicit comparison happen or become vividly apparent to the perception and feeling of the reader, the metaphor is more effective.

c. Relationships in metaphors may be noun-noun, adjective-noun, noun-verb, etc. The most common is noun-noun.

d. To make a metaphor take any subject (e.g., a girl, books, bombs, rain, sun, sickness, a fountain, me, you, us, salesman, science, mother, etc.).

e. Next write down all the things you think of when you think of this subject (e.g., for girls).

they don't like dogs
they make boys run around
dogs don't like them
they are foggy brained
they are pretty
they wear things that sparkle.

f. Next think of some thing that has one or more of the qualities you described but is otherwise quite different (e.g., a city: bright lights, smog, animals don't like it).

g. State the relationship as an equality of the form a is b. Thus "a girl is a city."

h. Now use the other associations for your subject (girls) and all you can think of for the comparison object (city) and write additional lines making us believe the comparison in such a way that you change or make more vivid the meaning of girl (and city).

4. List a number of EXAMPLES (EG^S) relevant to the rules. The following examples of metaphors have been selected. Examples for procedures represented in steps 3d to 3h will be generated as needed in writing frames.

a. We're anything brighter than even the sun
(we're everything greater
than books
might mean)
we're every anything more than believe
(with a spin
leap
alive we're alive)
we're wonderful one times one.

b. A world of mode
is not a world of born - pity poor flesh
and trees, poor stars and stones, but never this
fine specimen of hypermagical
vitraomnipotence.

c. A politician is an arse upon
which everyone has sat except a man.

d. Love is more thicker than forget
more thinner than recall
more seldom than a wave is wet
more frequent than to fail.

e. Our doubts are traitors
that make us lose the good
we oft might win
by fearing to attempt.

f. The ailing fountain coughs.

g. What if a dawn of a doom of a dream
bites this universe in two.

h. Though wise men at their end know dark is right
because their words are forked no lightning they
do not go gentle into that good night.

i. In the torrent salmon sun
in my seashaken house.

j. Spring is . . . a perhaps hand
(which comes carefully out of Nowhere) arranging
a window, into which people look (while
people stare
arranging and changing placing
carefully there a strange
thing and a known thing here) and
changing everything carefully

k. Nothing I cared, in the lam white days, that time would take me.

l. The old man who is but
a tattered coat upon a stick.

m. Her hand was ice.

n. The wine-dark sea.

o. She is a city full of bustle
making everybody hustle
leaving animals without food as she
wanders around with a foggy head.

p. Cliches to be transformed into metaphors:

cunning as a fox
smart as a whip
right as rain
work like a horse
busy as a beaver
hard as a rock
warm as toast
honest as the day is long
stiff as a board
light as a feather
gentle as a lamb
easy as pie
love is blind
thick as molasses
like talking to a brick wall
swim like a fish
blind as a bat
strong as a bull
eats like a horse

q. Other poetic devices for discrimination frames:

(1) Simile

Now as I was young and easy under the apple boughs
About the lilting house and happy as the grass was green

Her cheeks like apples which the sun made red.

(2) Alliteration

Sudden in a shaft of sunlight
When I was a windy boy and a bit.

(3) Hyperbole

There is nothing in the world that I don't know

But I, Ann's band on a raised hearth, call all
the seas to service.

Step Four.--An initial program was written for some of the objectives as follows:

1. The criterion frame outline for the metaphor program is the criterion test presented above. The order of items for use in the

program is presented below together with identification of each item as assessing primarily a discrimination or chaining behavior. These elements are of course inseparable since a discrimination often involves a chain (if broken down into smaller elements), and chains always involve discriminations.

Criterion Frame Sequence

Criterion Test Item Number	Major Type of Behavior
(8)	Discrimination of metaphor from non-metaphor.
(7)	Discrimination of context which makes a metaphor happen from context which does not.
(6)	Chain of observable behavior of adding context to a metaphor. The inferred chain (not tested) is listing associated words for elements of the metaphor, etc., etc.
(5)	Chain of writing a metaphor from a given cliche and adding context to make it happen.
(4) (3)	Chain of identifying ideas from own writing, transforming them to metaphor and adding context.
(2)	Discrimination of meaningful high association ideas and well expressed ideas in own writing.
(1)	Chain of writing from experience, free associating, etc. at a high rate.

One other element of analysis of behavior is stimulus and response generalization. This unit will be used primarily in editing objectives, criterion frames and teaching frames. Thus, if a student can identify only one kind of metaphor (noun + noun), the identification response would be highly limited or not producible under a generalized set of stimulus conditions. Or if the chain of writing a metaphor is producible by the student only when he is given a subject in a certain form (e.g., as a simile), his behavior chain of metaphor writing is not generalizable enough since it would be most appropriate to be able to produce that chain under many other conditions. On the response side, if discrimination and chaining responses are producible only in one form the repertoire is seriously limited.

2. One student was tutored beginning with criterion frame items as pretests and following up with teaching between criterion frames where it was needed. The student has a poor school record. He is in grade 9.0 of average scholastic ability, C and D performance in most subjects, and presents interfering behavior problems in the classroom and out. The results were as follows:

   a. Began by giving student item 8.a. to see if he could identify which was the metaphor. He could not. I defined metaphor, gave an example, and then asked him to pick out which was the metaphor. He still had difficulty. It appeared that my examples involved difficult discriminations. Thus the pair of sentences:

      her hand was ice
      her hand was cold

      are too similar in form. When I changed it to her hand was a block of ice and her hand felt cold, he got it right but was still unsure. Then when I added the prompt "is her hand a block of ice?" and developed that approach it was very easy for him.

   b. Items with "like" or "as" were confused with metaphor. Thus I plan building in the notion of comparison first and then immediately teach the discrimination of simile and metaphor as two kinds of comparisons to eliminate this competing response.

   c. Discrimination of context which makes the metaphor happen was easy on item 7.c.(1) and (2), but the other items in 7 appeared all to be examples where the context did make the metaphor happen, even though I didn't intend that.

   d. Item 6 producing the context for a metaphor was difficult when taught directly. It was necessary to teach intermediate steps in the chain. For example, we used "ice cream is female" as our metaphor. It was necessary to ask for and list characteristics of ice cream, then list characteristics of female related to the ice cream characteristics. And finally to call for completion of the context in the form of two more lines relating the two objects. The prompt of talking about the subject (ice cream) as if it were ice cream but only about aspects of ice cream that are like "being female" was necessary. Together we produced the following. Items on which I prompted are asterisked.

ice cream	is	female
soda		face, bubbling*, pinches*
strawberry		lips
good taste		cute
sweet*		sweet
melts away*		gets lost

Ice cream is female
it is sweet*
but doesn't stay with you very long*

Ice cream is female
it has good taste
but often melts away

e. We went through two other examples:

"I am a rock" and "a ship's crew is a river" in the same way. Two hours after completion of the "lesson" the student came up to me and gave me this:

Day after day, day after day
We stuck, nor breath nor motion
As idle as a painted ship
Upon a painted ocean.

Thus, without an assignment, he continued work on figurative language but ended up with a rather effective simile instead of a metaphor. In other words after one hour of instruction this student had the concept of comparison (two of his previous poems I have contain no simile or metaphor) and used it in the form of simile.

3. A preliminary set of teaching frames were written using the experience of tutoring without the frames and the collection of RUS and EGS collected earlier. The program is presented below:

FIRST DRAFT OF PROGRAM

Programmed Metaphor

1. Sometimes you want to say something old in a new way so it will have a more powerful effect.

One way of saying things in a different but powerful way is to compare them with something else. "I am like a rock" and "I am a rock" are possible ways of saying I am strong by comparing myself with a rock.

NO ANSWER REQUIRED

2. Simile (SIM-a-lee) and Metaphor (MET-a-four) are two ways of comparing things with something else. Learn them.

   Simile - compares or describes things alike in some ways but unlike in others by using the words <u>like</u> or <u>as</u>.

   I am like a rock.
   She is like a ribbon.
   Spring is like a hand.
   The record is as sweet as a bird.
   I was as lonely as a cloud.

   Metaphor - compares or describes things alike in some ways but unlike in others <u>without</u> using the words <u>like</u> or <u>as</u>.

   I am a rock.
   She is a ribbon.
   Spring is a hand.
   The record is a sweet bird.
   I was a lonely cloud.

NO WRITTEN ANSWER REQUIRED

3. Which is metaphor and which is simile?

   (a) A bed is <u>like</u> a boat. _____
   (b) A bed is a boat. _____
   (c) A bed is <u>as</u> dreamy <u>as</u> a boat. _____

(a) simile (b) metaphor (c) simile

4. What is the name of a comparison between things which are alike in some ways but unlike in others, if:

   (a) The word <u>like</u> or <u>as</u> is used. _____
   (b) The word like or as is <u>not</u> used. _____

(a) simile (b) metaphor

5. Which is metaphor, which simile, and which neither.

(a) My hand is a block of ice. _____
(b) My hand is cold. _____
(c) My hand is like a block of ice. _____
(d) My hand is as cold as a block of ice. _____

IF YOU CAN ANSWER THIS CORRECTLY, SKIP THE NEXT THREE EXERCISES

(a) metaphor (b) neither (c) simile (d) simile

6. Some statements do compare things.

her hand was like ice.
her hand was a block of ice.

Other statements do not compare things.

her hand was moving.
her hand was shaking.
her hand was cold.

Mark "C" beside each of the following statements which compares one thing with another, and "X" beside the statements which do not make a comparison.

(a) She wept for a thousand days. _____
(b) She wept like a storm. _____
(c) She was a storm. _____
(d) She was as wild as a storm. _____
(e) She was very sad. _____

(a) X (b) C (c) C (d) C (e) X

7. A simile compares things using the words like or as.
A metaphor compares things without using like or as.
Some statements do not compare things.

Mark each of the following as simile, metaphor, or neither.

(a) Mothers are oysters. _____
(b) Mothers are tight lipped. _____
(c) Mothers are like oysters. _____

(a) metaphor (b) neither (c) simile

8. Mark the following as simile, metaphor, or neither.

(a) Salesmen are moons. _____
(b) Ships are like dreams. _____
(c) The leaves crackle. _____

(a) metaphor (b) simile (c) neither

9. A metaphor or a simile is most effective when the lines which follow it (the context) make the intended comparison "happen" or come alive.

Spring is like a perhaps hand
(which comes carefully out of Nowhere) arranging
a window, into which people look (while
people stare
arranging and changing placing
carefully there a strange
thing and a known thing here) and
changing everything carefully.

In the above comparison of Spring to a hand in a window, the context (the lines which follow) makes the comparison more vivid than the first line alone.

(a) Is the comparison a simile or a metaphor? _____
(b) Does the context make the comparison "happen" or "come alive"? _____

(a) simile (b) yes it does

10. Here are two verses. Read them and then answer the questions below.

(1) Karen is a city
full of bustle
making everybody hustle
not feeding the animals
foggy in the head.

(2) A bird is like a book
I heard one sing in the forest today
A failing note
He was perched in that great tree
Whose sap was ebbing away.

(a) Is the first line of verse (1) a simile, a metaphor, or neither? _____
(b) Is the first line of verse (2) a simile, a metaphor, or neither? _____

(c) In which verse, (1) or (2), does the context make the first line comparison come alive? _____

(a) metaphor (b) simile (c) verse (1)

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11. ME: tough, strong legs, hard to break or lose my temper unless you rub me the wrong way, colorful clothes, make beautiful paintings.

TOUGH - like a rock: hard, durable, brittle, colorful gems, beautiful polished.

I AM A ROCK

I am a rock
Sometimes rough and hard
Until someone strikes
with the wrong angle
and _____

(a) Finish the above verse to make the metaphor of the first line have a more striking effect by the context you add.

THERE IS NO ONE CORRECT ANSWER. IF YOU USED THE METAPHOR, YOU ARE RIGHT.

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12. FEMALE: face, lips, cute, sweet, girl friend, I don't have any.

SWEET like ICE CREAM

ICE CREAM is FEMALE

Ice cream is female
It is usually sweet
_____
_____
_____

(a) Finish the above verse by adding two or three lines of context to make the metaphor more livid.

THERE IS NO ONE CORRECT ANSWER. A COMPLETION BY ANOTHER STUDENT WENT LIKE THIS:

It comes in many colors
But goes quickly with the heat
And there is none on my street.

---

13. BED: dream, travel, nightmares, lost, awake, safe.

TRAVEL - like boats which travel to dreamy places, encounter danger, get lost but usually arrive after the nightmare adventure, safe at the destination.

(a) My bed is _____

_____

_____

(write 3 more lines of context to make the implied comparison happen for the reader)

AGAIN THERE IS NO ONE CORRECT ANSWER. ONE STUDENT WROTE THE FOLLOWING:

My bed is like a boat
Barging in to rockbound shores
And losing sight of home
Till mists give way to surer loam.

---

14. SALESMEN: Always smiling, if you look at them they can get you to believe anything, they are usually warm people, they make the economy grow, they can get you to spend more than you should.

SMILING: SUN

(a) Write down all the things about sun you can think of that are related to the things about salesmen written above or other things about salesmen you can think of.

_____

_____

_____

(b) Make a comparison between salesmen and sun as a metaphor or a simile.

_____

(c) Write three or more additional lines of context to make the metaphor or simile happen or become more vivid.

_____

_____

_____

THERE IS NO ONE CORRECT ANSWER

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15. WATER FAUCET: drips, sputters, cool, wet, clean, splashes, turned off, doesn't operate.

DOESN'T OPERATE:

(a) Write down something that "doesn't operate" suggests that has something in common with a water faucet.

_____

(b) Now write down all the things about it that are related in some way to the things written about the faucet or to other things about a faucet.

_____
_____
_____

(c) Make a comparison statement between WATER FAUCET and the other thing expressed as a simile or metaphor.

_____

(d) Write a verse of four or more lines so that the context makes the comparison happen or become more vivid.

_____
_____
_____
_____

THERE IS NO ONE CORRECT ANSWER, BUT ONE STUDENT WROTE THE FOLLOWING:

(a) SICK MAN
(b) coughs, sputters, is cold, near death, can't operate too well at work, diseased or dirty
(c) the faucet is a sick man
(d) the faucet is a sick man
the poor ailing
coughing
sputtering thing

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16. (a) SAM (or name any man you wish): _____

_____

(b) Think of any man and write down all the things that he brings to mind. Write down at least 8 things.

_____

_____

_____

_____

_____

_____

_____

_____

(c) Now pick out one outstanding thing you wrote down and think of any object or thing that has a similar characteristic (e.g., if you wrote 'helps people better themselves' you might say that a 'bridge' has a similar quality in that it helps you get where you want to.

_____

(d) Write down all the qualities of the thing you mentioned in (c) that are in some way related to qualities of the man you described in (b).

_____

_____

_____

(e) Write a comparison between the two things (a and c) in the form of a simile or metaphor.

_____

(f) Now write a verse of four or more lines to make the simile or metaphor more vivid.

_____

_____

_____

_____

NO ONE CORRECT ANSWER

17. (a) Name any subject or thing. _____

(b) Write down all the things you think of when you think of this subject.

_____
_____
_____

(c) Now name some thing that has one or more of the qualities of your subject in (a) but is otherwise quite different.

_____

(d) Write down all the things that the second subject means to you that are in some way related to the first subject.

_____
_____
_____

(e) Write down a comparison between the two subjects in the form of a simile or metaphor and write three or more additional lines of context to make the comparison come alive or happen for the reader.

_____
_____
_____
_____

NO ONE CORRECT ANSWER

Step Five.--The preliminary program was tried out on two students (a sixth grader and a college Freshman). The results were as follows:

1. Items 1 to 5 created no problem; all correct.

2. Items 6-8 (remedial branch for error on 5) were taken by the sixth grader in spite of correct performance on 5.

3. Items 9-10. No problems; all correct.

4. Items 11-17 were mostly completed in a formally correct manner by the sixth grader but the completions lacked semantic significance and aesthetic effect occasionally.

5. Item 13b for sixth grader was:

   My bed is like a room of pillows
   It isn't exactly even
   But it's still comfortable.

   (The item called for completion using the metaphor of 'my bed is a boat'.)

   The error on item 13a was:

   My bed is hard.

   Thus, the steps in the process were not clear.

6. The sixth grader did, however, produce some fair metaphors.

   Item 12. Ice cream is female
   It is usually sweet
   It melts and gets soggy
   Or is too hard to manage
   But it still tastes good.

   Item 14. A salesman is like a sun
   Making you warm
   And sometimes making you feel terrible.

   Item 15. The faucet is a killed car
   That sputters
   When it doesn't operate
   It's cold and sometimes hot.

   Item 16. Mervin is like weather
   He is damp
   Has hazardous habits
   Also unpredictable.

Item 17. The woman is a television
Always making noise
Always chasing boys
It's sometimes fun to watch them.

7. The college freshman stopped on item 15. She said she couldn't concentrate. Her item responses added no information beyond the sixth grader's responses. Her comments did though. She said that "bed and boat on item 13 didn't click for me." "I wish I'd had something like this when I was in sixth grade." "I didn't get the idea on items 11 and on as to what you wanted."

8. Neither student understood that we were simulating a process for writing metaphor clearly enough to articulate it although they responded as if they had the "concept."

Interpretation of results and suggestions for revision.

1. The material was generally motivating. Respondents who just looked it over made pleasant noises. The sixth grader went through it with some enthusiasm and the freshman found it valuable. No general revision needed for motivational effect.

2. The discriminations were effectively taught in very few frames. No revision needed here.

3. Items 13a and b were under-prompted for the sixth grader. 13a, My bed is _____, was followed by a request to finish the comparison with a simile or metaphor. No suggestion that it should be based on the above associations. Bed - travel - boat. Add a prompt to that effect if program is kept as it is otherwise.

4. Items 12-17. Responses for the sixth grader were all good metaphors with fair use of context to "make it happen." But they are more like jingles than poetry and more stereotyped than a representative selection of metaphor. Thus, it seems clear that we need an analysis of metaphor to identify types of metaphor and define their composition so that "pattern practice" exercises may be built similar to syntactic pattern practice so as to get greater variety. The form of most of the context we got was just like the simile or metaphor statement itself.

Mervin is like weather
He is damp
(He) Has hazardous habits
(He) Also (is) unpredictable.

More poetic metaphor, of course, changes its syntactic patterns or varies them. Thus we shall identify some metaphoric patterns and add that kind of practice to the program. Also, we shall eventually fade away the topic line in some of the poems. Thus, Roethke's Big Wind does not ever state the metaphor that "The greenhouse is a ship." Instead he makes that happen by beginning:

Where were the greenhouses going
Lunging into the lashing
Wind driving water
So far down the river

We stayed all night,
Stuffing the holes with burlap;
But she rode it out,
That old rose-house.

She sailed into a calm morning,
Carrying her full cargo of roses.

5. The college freshman's lack of a "click" on item 13 and the general confusion over the form of items 12-17 suggested the obvious observation that, poetry being a personal matter, not all students will be "grabbed" or "click" with the same metaphor. This and the need for an "advance organizer" or overview suggest that we might add a series of items "simulating" the writing of some verse by two or three different poets so that each student may choose his own poet (or poem) to follow through the creative process. Thus, following item 10 we will present three poems and let the student choose one to follow through a simulation of how the poet might have created it.

Revision of the program:

Items 1 to 10 will remain the same. Other items will be written according to the prescription stated above.

Step Six.--The revised program was tried out on a class of sixth graders. The following results were obtained for the 31 sixth graders responding:

1. Prerequisite behavior tests. Description and scoring.

   a. Word beginnings and endings (WBE). Sample:

      "Write as many words as you can that start with S and end with N."

b. Associations (ASSOC).

"Think of a word that is associated with both given words." For example:

jewelry - - - - - bell (answer: ring)

It should have a different meaning in connection with each of the words.

c. Simile interpretations (SE).

A woman's beauty is like autumn because:

(1) _____
(2) _____
(3) _____
(4) _____

d. Word endings (WE). Sample:

"Write as many words as you can that end in ATE."

Score on all four tests is number right.

2. Criterion frames within the program. Description and scoring.

a. Frame 5. Possible score is 4. This frame calls for discrimination of examples of metaphor, simile, simile, and neither.

b. Frame 10. Possible score is 3. This frame calls for discrimination of metaphor, simile, and which of two verses has a context which makes the metaphor or simile "happen."

c. Frame 12. This is not a criterion frame on ability but does assess preference for a poem. The choices are E. E. Cummings' "Spring is like a perhaps hand" (choice a) or his "Who knows if the moon's a balloon" (choice b).

d. Frame 25. This is a five-part frame in which the pupil:

(1) names a subject. (Score is 0 or 1.)

(2) writes down all he can think about it (associations). (Score is number of different associations.)

(3) names a thing different than the subject but having at least one quality in common. (Score is 0 or 1.)

(4) Writes down associations for "c." (Score is number of different associations.)

(5) Writes a comparison line (metaphor or simile) and three or more additional lines of context to "make it happen." The score is one point per line if the lines in reality state a comparison and develop it.

(6) An additional score was added on quality of the response in "e." The possible range is 0 to 3.

0 = poor.
1 = a prosaic comparison is stated that makes sense.
2 = a comparison is stated that makes sense and is somewhat original.
3 = comparison makes sense and poetry.

3. Summary of data on Validational Testing. (See above for code.)

Pupil	WBE	ASSOC	SE	WE	Criterion Frames								
								- - 25 - -					
					5	10	12	a	b	c	d	e	f
1	17	5	5	30	4	3	b	1	3	1	1	2	0
2	9	6	6	24	4	3	b	1	8	0	0	0	0
3	22	1	6	35	4	3	b	1	3	1	3	0	0
4	21	8	6	27	4	3	b	1	5	0	0	2	0
5	13	3	3	36	4	3	b	1	6	1	5	0	0
6	18	2	1	25	4	3	b	1	6	1	2	3	0
7	16	3	4	23	4	3	b	1	6	1	4	4	0
8	19	3	2	24	4	3	b	1	3	1	2	4	0
9	20	4	7	36	4	3	a	1	3	1	3	4	0
10	19	9	2	28	4	3	b	1	3	1	2	3	0
11	13	5	1	29	4	3	b	1	3	1	3	4	0
12	15	7	3	21	4	3	b	1	3	1	3	4	0
13	15	4	6	28	4	3	b	1	3	1	3	3	0
14	14	9	7	22	4	3	b	1	6	1	5	4	0
15	15	5	4	28	4	3	a	1	5	1	3	4	2
16	15	8	4	27	4	3	b	1	3	1	3	0	0
17	11	10	5	30	4	3	b	1	3	1	3	4	0
18	16	5	5	26	4	3	b	1	4	1	3	3	0
19	20	2	6	22	4	3	b	1	4	1	2	4	0
20	31	9	4	32	4	3	b	1	11	1	0	4	0
21	21	10	5	40	4	3	b	1	9	1	3	4	0
22	14	4	6	29	4	3	b	1	3	1	3	4	0
23	16	11	6	28	4	3	b	1	4	1	3	4	0
24	22	4	3	24	4	3	a	1	3	1	3	0	0
25	17	10	6	27	4	3	b	1	3	1	3	1	0
26	11	8	3	29	4	3	b	1	6	1	2	0	0
27	25	8	4	25	4	3	b	1	3	1	3	4	0
28	14	5	7	34	4	3	a	1	3	1	2	4	1
29	13	4	3	22	4	3	a	1	6	1	3	4	1
30	18	8	5	24	4	3	b	1	4	1	0	0	0
31	14	4	9	27	4	3	a	1	4	1	2	0	0
Mean	16.9	6.0	4.6	27.8	4	3	6a[s]	1	4.5	1	2.5	2.6	0

4. Interpretation of data and recommendations:

a. Criterion frames 5 and 10 assessed the discrimination behavior objectives. The program performed perfectly on these objectives and there was no relationship to entering behavior of Ss.

b. Criterion frame 12 was a preference item. The most popular choice of the two poems was "Who knows if the moon's a balloon" (25 for this and only 6 for "Spring is a perhaps hand"). The major difference I see in the poems is that the preferred poem is about people, the other about nature. (The title doesn't make it appear so, but it is.) This will be of some help in selecting preference items for this group.

c. Criterion frame 25, subsections a to e were completed accurately by 21 of the 31 pupils. But several serious limitations were apparent.

(1) The number of different associations produced for 'b' and 'd' were much lower than produced even on the difficult association test. However, there was no associational fluency test included and perhaps we should include one on our next tryout.

(2) The choice of a second subject (c) and of the associations for both subjects were very poor. For example, the following partial random list of first and second subjects illustrates the problem.

person	-	cute
English	-	math
sports car	-	going to Friday night shows
toy	-	piano
bomb	-	dynamite
cow	-	refrigerator
candy	-	girls
horse	-	swim pool
lamp	-	girl
ice skating	-	snow

Thus, we need to do something to prevent cueing highly similar things or characteristics of things. Our instructions do predispose to this.

(3) The lists of associations are unimaginative. For example, for horse - swim pool (not bad for different kinds of things) we have:

horse	swim pool
something I want	something I want
a big yard for it	a big yard for it
brown with a black mane	fun

(4) The four or more lines produced to state a metaphor or simile and make it come alive are for the most part (30 out of 31) only formally correct and in all 31 cases lacking in poetic appeal.

Sample of standard poor response (score = 0 on "f")

a horse is like a swim pool
it's something I want it's fun,
it's cool, crazy and something wild,
and you need a big yard for it.

Sample of best response (score = 2 on "f")

snow is like a kitten because
both are silent whenever they
go always tired resting
anywhere.

Thus, some flexibility is needed in stating comparisons and making them come alive with the context.

Phase Two: First Generation Program

In this phase we obtained assistance from graduate students in linguistics and reanalyzed the task. The development is discussed in three steps. The program outline is given but the program itself is not included in this report. The Second Generation program is included in Appendix 2.

Step One.--Developing procedures for increasing free written expression with high association value and affect for the writer. This task is based on the assumption that most people have much verbal ability and experience to draw upon and that the task is to get it out of them so that they can rearrange and revise it for poetic effect. Our first approach was to increase written output by reinforcing (rewarding) increases in number of words written. For a number of sixth grade subjects the pattern was similar. Twenty minute sessions were run each day for about 20 days. During the baseline condition (the first 4 or 5 days) the student was asked to write until told to stop. After 20 minutes the experimenter stopped the student. Total number of different words were plotted.

The 4 or 5 day baseline period ranged between 60 and 70 words per session. In the next 8 to 10 sessions or experimental condition the student was given a chance to earn something desired. The student made a list of items (record, slippers, ballpoint pen, etc.) and points were set to obtain them. The sessions were informally run by some of our students with very loose controls. However the number of different words per session moved from baseline (65) to over 100 in the last few sessions of the experimental period. In some cases a return to baseline was used and there was a consequent drop to 70 to 80 words per session. A sample early baseline and later experimental session response is included below.

Sample Baseline Response; Sixth Grade Girl.
Session #1.

The Pilgrims landed on Plymouth Rock in 1620. A lot had happened before that, though. The reason they came to America is because they didn't want to worship where the king wanted them to. First they went to Holland, but after a while their children began to start speaking Dutch and follow Dutch customs. So, they got together and it was decided that they were going to sail to America.

One dark night they all crept out of their homes and went out to board either of two ships. After they all were on board they set sail for America.

After they had been sailing for a some days

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Same Experimental Session Response: Sixth Grade Girl
Session #9.
(Sessions 1 to 5 were baseline)

Snow

I've wondered about what snow feels like. It's probably happier in the sky than on earth. It falls down happy as can be. It hits the earth, what a shock. If it's the first snow it feels like its been put on a stove. It melts up fast. That snow is luckier than the other even though it doesn't know it. After a while when the ground gets cooler the snow stays. When it is time for the kids to go to school I feel sorry for the snow. Its trampled, stomped on, run on, snowballed, and squashed. Och, ooch, eech. No wonder it's happier in the sky. Wouldn't you?

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Spider

Spiders are happy creatures. They like to be left alone. This story is about Bil who was once a spider.

One day old Bil (who was a spider) was crawling around as always. He decided to take a 10 legged walked and see the world. He was curious. Though he had no idea of what humans were like he was on his own. On the sidewalk while he was walking along behide was the mailman. The mailman

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Although the approach of reinforcing number of words per session produced increases in quantity of words it did not produce increases in quality of material for writing poetry for most students. Thus we decided to try the more standard approach of varying elicitation procedures rather than trying to deal with consequences of responses alone. A variety of procedures were used until we came upon a collage put together by a local art teacher from magazine pictures representing a tremendous variety of items. See Appendix 4 for a sample of the collage. We allowed ten minutes for a written reaction and got fairly rich material from most students. Most of the ideas expressed were somewhat alarming but were nevertheless strongly felt expressions which adequately represented what we were after. A sample response is presented below:

FREE WRITING EXERCISE

Instructions

Look at the poster in front of you. Study it carefully. (Pause) Do you find some things that remind you of your own activities or reactions or experiences? Look until one or more things strikes you strongly and then write anything that comes to your mind. Begin writing now and keep writing until I tell you to stop. If you get stuck and can't write more just look at the poster again or look at what you have written and if it reminds you of something else write it. (Stop student in 10 minutes).

I personnally feel very strongly against most of the protests going on now. I especially protest about the ones against war. These protests are staged by people who have never studied war. They say war is the scourge of mankind. Although war is hell it is easy to prove it is in many ways our salvation. First-off we are now worried about over-population. Think how much more overpopulated it would be if no one would have ever been kilt in war. There would be even greater hunger with 1,000's dying daily from hunger.

Food would skyrocket in its price and there would be no money left in budgets for luxuries. We would be literally living in the middle-ages for in war we develop 10 times more rapidly than we do in peace.

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Step Two.--Designing the revised program. There were three major activities in the design of the program on writing poetry in this phase of the project: Developing procedures to elicit free verbal expression of thoughts and feelings (this is discussed in Step one above), identifying metaphor patterns and transformation rules for producing them (this is discussed in a separate chapter) and designing the total sequence of chains, discriminations and generalizations to be learned. In Step two we discuss the latter activity which is a putting together of the total program. The program sequence at this stage was as follows:

1. Free written response to collage.

2. Underline emotional impact words or phrases.

3. Box-in words with high association value.

4. Write a ten-line poem.

5. Revise the poem to get the effect you want.

(The above five steps constituted a pretest as well as an introduction to the program.)

6. Select the best liked Haiku from three which have been selected out of a large number presented to sixth graders for preference ranking.

7. Read a simulation of how the poem might have been written.

8. Read a summary of the simulated steps in writing a poem.

9. Select content from your own writing (in reaction to collage) and write a Haiku form poem (rough) and then revise it to fit the form precisely.

10. Do the same with other content.

11. Do it again.

12. Study Haiku examples and write imitations using content from your own writing.

13. Do the same as Steps 9-12 but now with the Tanka form.

14. Compose live Haiku with a partner using the game approach. One person picks up a card with the first line of a Haiku (the room is warmer) the partner composes a second line of 7 syllables (not for the turn of a knob) and the first person composes the final 5 syllable line (but the matching eyes).

15. Compose live Tanka as above.

16. Practice creating metaphor using a variety of guides developed by linguistics specialists.

17. Practice creating alliteration and assonance.

18. Revise your original Haiku and Tanka to include alliteration and assonance.

19. Identify devices in other sample poems and imitate them.

20. Write another 10 line poem using procedures like those in Steps 1 to 5.

Step Three.--Developmental tryout. The program developed in this phase was submitted to informal developmental testing only. On the basis of this testing an entirely new program was written (see Appendix 2) which was subjected to a more extensive tryout as described in Phase Three below. The major things we learned from this tryout are summarized below with illustrations.

1. The collage elicited plenty of potentially useful material some of which is excellent and some of which is too abstract. Students were asked to box-in sentences that had high association value (they could talk about for hours) and underline sentences and phrases that made them react with some emotion (laughter, fear, feeling alone). Samples of underlined material are:

   - To see the graveyard filled with so many graves makes me wonder who will be the next in my family to go.
   - I don't think anything could be more terrible than starvation.
   - (Love) is something that adds happiness and sunlight into your life.

   Samples of boxed-in material are:

   - To see these little children standing there with their bones coming out through their skin. It gives me a feeling of

asking how can I help them. How can I show them that I care so much.

- In the U. S. they are too willing to help in some cases and refuse to help in others. Yet many people give of their time or money or anything that is needed.

- They look so terribly skinny, sick, and unhappy and I think of all the food we have. It makes me somewhat happy that I live where I do and I have nice clothes and lots of food.

Thus, in the revision we will build approaches to getting students to look at things from different viewpoints--like an x-ray machine, a Zoom lens camera, or supposing no one could talk.

2. The Haiku and Tanka forms worked very well for initial stages of writing to force dropping out of end of line rhyme. But material is still often abstract and poor techniques are used such as word order inversions. Some samples are presented below:

    - If the world could clean
      itself we would have nothing
      to worry about.

    - All the lonely kids
      in all the lonely countries
      are all unhappy.

    - People picketing
      over some useless ideas
      no one seems to care.

    - From this lonely earth
      starving people die
      hunger makes me sad.

    - Behind all phonies
      there is sadness deep within
      which you know not of.

    Thus the form is working but more structure is needed to get poetic devices used within these structures.

3. The exercises in metaphor produced much trite metaphor and some novel metaphor both in individual lines and poems. Some samples are presented below. The forms of most are similes.

Individual lines:

- Spring is fresh like newly broken bread.
- Hate is accidental like car crashes.
- Her face glows like a moon.

Poems (Tanka):

- Her moon glowing face
  disappeared through the darkness
  the day was coming
  people were rising from sleep
  while I died once again.

- Long rippling hair
  tempting teeter-totter smile
  a beautiful girl
  I sat watching her move
  with the delicacy of a fawn

- Accidental hate
  it grew and grew every day
  until it became
  a dangerous weapon for
  everybody close to him.

Thus metaphor exercises worked to some extent. Poems improved much over the original ones but much metaphor was trite and the context did not make it happen enough or come alive.

Our confidence in the possibilities of eliciting poetry already in people was increased tremendously by the observation that with minor changes in wording of instructions, the initial poems (pretests) came out rather natural and without end of line rhyme.

Thus, the Phase Two draft of the program was given to some local poets with instructions to make revisions along the lines indicated above. That version was then edited and became the final (current) version of the program presented in Appendix 2 and analyzed in Phase three below.

Phase Three: Second Generation Program

The development and preliminary validation of the current version of the program is presented here. A copy of the program is in Appendix 3. It is important to note that the program is not considered complete at this stage, the development beyond the first 63 frames is sketchy and uneven in quality and the group validation is based on a tryout covering

only the first 54 frames. We decided to sacrifice detailed development of program segments for the overall development of a larger context because our initial validation on the First Generation Program did not produce satisfactory final products. Thus our intent is to conduct a validation of the current version as it is and then revise again section by section based on further tryouts and reanalysis. This phase is discussed in two sections: (1) Major changes in the program, and (2) Validation: Data and Interpretations.

Major Changes in the Program

The current version of the program contains 156 frames compared with 55 frames of the First Generation Program. The content has been extended and modified as described below. The complete program is in Appendix 2.

1. Eliciting fluent written expression of ideas and feelings to serve as a basis for writing poems. The major change in this component of the program is the inclusion of 10 prompts to stimulate writing about the collage from a variety of viewpoints. These occur in Frame 9 and include procedures such as: write about it as if you are seeing it for the first time, as if it were totally unfamiliar to you; write about anything in it that frightens you; describe what you would see if you were a camera with a close-up and telephoto lens and a slow-motion and fast-motion speed or an x-ray lens that allowed you to see into pants pockets, purses and boxes, etc. In addition the student was asked to write and rewrite reactions to the collage based on these prompts. The typical student response was that there was too much writing in this stage. These changes were made to attempt to elicit greater imagery and concrete detail.

2. Instructions to revise the poems written by the student were also extended considerably. In the first 40 frames there are at least 10 separate occasions in which instructions are given to revise poems written. Also, instructions for revision are more detailed. Criticism of other students is sought as a basis for revision and specific questions are presented to prompt revisions. See the Table of Contents of the program to find the numerous "revision" sections.

3. Alliteration and assonance are given more extended treatment and consonance, onomatopoeia, rhyme, meter, stanza form, technique and imagination are added.

Validation: Data and Interpretations

Again we must repeat that the major effort has gone into program development and the group validation required such a long tryout that only the first 55 frames of the 156 frame program were included in the final validation. It is clear this has grown from a four week program to a full year program. However, the validation data are of considerable interest nevertheless because of the illustrative methodology for analysis, the criterion measure development and scoring system, and the analysis of relationships between the ETS cognitive reference tests (short tests of verbal abilities based on a considerable number of factor analytic studies which reduced the tests to measures of a variety of unique factors in both convergent and divergent verbal skills) and criterion test scores. This chapter concludes with an analysis of the validation data.

Method

Subjects

Two intact classes of high ability ninth grade students, one class from each school, were selected from two predominantly middle-class junior high schools located in the Salt Lake School District. One classroom was assigned randomly to the experimental condition. The number of boys and girls in each class was approximately equal. The mean C.A. of the subjects was 14-8. All students had approximately the same amount of exposure to all facets of English Literature prior to the study.

Initially 61 students comprised the sample of 31 experimental subjects and 30 control subjects. Due mainly to absenteeism which resulted in incomplete data, the final sample consisted of 26 experimental students and 27 control students.

The study was conducted over an eight week period, ending during the last week of school.

Tests and materials

All students were administered a pre-post poetry criterion test developed by the principal investigator (see Appendix 1), and seven Reference Tests for Cognitive Factors (French, Ekstrom, and Price, 1963). The seven tests and the abilities measured by each are as follows:

1. Associational Fluency, Form A, fa-2. This is a test of one's ability to produce words similar in meaning to a given word.

2. Association IV, fa-3. This is a test of one's ability to produce a word associated with two given words but which has a different meaning in its relationship to each of them.

3. Expressional Fluency, Form A. This is a test of one's ability to write as many four word sentences as possible when the first letter of each word is given.

4. Simile Interpretations, Fe-2. This is a test of one's ability to give different interpretations to similes.

5. Topics Test, Fi-1. This is a test of one's ability to write as many ideas as possible about a given topic.

6. Word Beginnings and Endings Test, Fw-3. This is a test of one's ability to write as many words as possible beginning with one given letter and ending with another.

7. Vocabulary Test, V-2. This is a test to measure one's knowledge of vocabulary.

The Reference Tests were administered to determine the relationships if any between levels of various types of linguistic development and poetry writing skills.

An experimental edition of a self-instructional approach to poetry (Appendix 2) was developed by the principle investigator with the aid of specialists from other disciplines (linguistics, English Literature). The experimental edition contains 156 frames in which an attempt was made to teach systematically and successively the following aspects of poetry writing.

1. Elicitation -- Frames were written to elicit from students feeling, ideas, etc. and revisions based upon them.

2. Other types of poetry -- Frames were written to teach students the techniques of writing Haiku and Tanka forms of poetry.

3. Poetic techniques -- Frames were written to teach such techniques as alliteration, assonance, consonance, onomatopoeia, metaphor, similes, rhyme, meter and stanza forms.

4. Techniques and imagination in poetry writing -- Frames were written to help the student incorporate various technical aspects of poetry into his general writing approach.

Throughout the major stages mentioned above, sample frames, criterion frames, and eliciting frames were included to enhance the appropriate discriminations assumed to be required.

A collage, with a main theme of human suffering, (see Appendix 2, page 1a) was developed by a local high school art instructor and was used to help students generate ideas and feelings which would provide the basis for their pre-post criterion poems. The collage, originally in color, was reduced to black and white for publication. It was felt that more meaningful comparisons could be made if the poems written centered around some of the central ideas or themes contained in the collage.

Scoring System

The pre-post criterion poems and the poems elicited by the frames in the instructional materials were scored quantitatively in accordance with a scoring system developed by a graduate student in the Department of English. The components of the poems selected for scoring (for which students could earn up to 80 points) were based upon both the technical and impressionistic aspects of poetry. The components to be scored were selected with the aid of two graduate students in English and a poet. The scoring system and the technical and impressionistic aspects scored are contained in Appendix 3.

Reliability of Scoring System

A sample of 53 poems was scored by an independent judge and his scores were correlated with the main judge's scores for the same poems. The coefficient of correlation between the two judges was .94, indicating an extremely high degree of reliability.

Q sort Technique

Pre-post criterion poems for all students were subjected to a Q sort technique (Stephenson, 1953). The raters consisted of three graduate students from the Department of English and three junior high school students. All poems were coded in such a way that pre-post distinctions could not be made by the raters. Prior to the sorting task each judge was asked to write the criteria used in sorting the poems. Immediately following, each rater was instructed to sort each poem into one of nine piles ranging from most preferred to least preferred. The method of forced distribution was used. That is, a prespecified number of poems were sorted into each category. After all the poems were sorted, each person was asked to rate the quality of the poems sorted. (See Appendix 4 for complete instructions given to each judge.)

The Q sort technique provided an opportunity to examine a variety of similarities and differences based on subjective judgments as opposed to the more objective measure discussed earlier.

Scoring for Reference Tests for Cognitive Factors

All tests were scored according to the scoring manual (French, Ekstrom, and Price, 1963). For Test 2, Associations IV, a more liberal scoring procedure was used, and in the following sections will be referred to as 2M. Two total scores were also used and will be designated as Total and M Total. The latter is simply a combination of student's total score and the 2M score.

Procedure

The criterion pre-test and the seven Reference Tests for Cognitive Factors were administered over a three-day period. The control classroom was not given any other materials with the exception of the post-criterion poetry test which was administered at the end of the eight week period. The experimental classroom was given the self-instructional materials on the fourth day. The classroom teacher, who was trained in the use of the self-instructional material, administered and monitored the program. The students worked on the instructional materials four class hours a week, devoting approximately forty-five minutes a day. The instructor kept a running record of student behavior, areas of difficulty within the program, and wrote out suggestions and recommendations for program revision based on her observations.

Consultations were provided the teacher upon request. Periodic observations were made by the project staff.

Due to time limitation, the students were only able to complete an average of 55 frames in the eight week period. The poetry post-test was administered to all students during the last week of school.

Results

Student Motivation

While the experimental students were initially highly motivated, their motivation dissipated greatly by the end of the third or fourth week. Many of the frames could not be analyzed because of an insufficient number of student attempts. Therefore the data were analyzed in various ways in the hopes of arriving at a fair analysis of the program. In some of the analyses to follow, which will be specified, the students' highest score on any given poem was used. The rationale for the highest score approach was based on the assumption that students' best poems could not be earned by chance, unlike the "monkey at the typewriter." To earn his highest score, it was believed that a student must put together in an articulate whole both his previously learned and, more importantly, his presently learned skills to arrive at relatively better forms of poetry.

In other words, there are far too many skills involved in writing poetry for the students' best poems to occur by chance. Thus, chance would not be a factor but level of motivation would be. It was reasoned therefore that looking at students' best poems for which they earned the highest scores would tap poems written when student motivation was high and thus constructive rather than poor.

Several statistical analyses were involved in evaluating the poetry program. The first set of analyses compared the experimental and control groups. The second set of analyses was conducted to determine the relative gain within each group, while the third set of analyses was concerned with prediction.

Comparative Analyses

The pretest poetry scores for the two groups were analyzed by the use of a t test for independent means. The means and s.d.^{s} for the experimental and control groups were 19.84 and 1.81, and 20.00 and 1.04 respectively. The t ratio was not significant (t=.09, P > df=51), indicating no difference on pretest poems between the two groups.

Pre-post difference scores between the two groups differed significantly. The mean gain score and s.d. of the difference scores for the experimental group were 3.50 and 1.33, for the control group 1.63 and 1.33 (t=2.45, P<.01, df=51). Thus, while the initial poetry scores were similar, it is noted that the experimental group exhibited significantly greater pre-post gains than the control group after having gone through only about 55 frames in the 156 frame program.

Within Group Gains

To assess gains within the experimental group (i.e., were their own pre-post gains significant) t tests for correlated means were computed. For the experimental group, a significant improvement occurred between pre-post testing (t=2.25, P<.05, df=24). The pre-post criterion means were 19.85 and 23.35, which yielded a mean difference of 3.50.

The control group did not achieve a significant pre-post gain (t=-1.22, P>05, df=25). In fact the pre-post means of 20.00 and 18.37 indicated a slight reversal.

For the experimental group, trends were analyzed and conducted where possible. While many poems were written within the 54 frames, not all students responded to all the scorable frames (i.e., in terms of writing complete poems which were amenable for scoring analyses). Of the poems analyzed within each workbook for each subject, only frames in which a large majority of subjects responded to were analyzed for within group comparisons.

TABLE 1-1

Means and s.d.s of Poems
Written to Six Frames

Frame No.	$\bar{x}$	s.d.
10	25.38	5.88
11	20.85	7.19
12	21.01	9.55
41a	22.58	6.65
41b	19.62	10.66
51a	21.42	9.83

The means and s.d.s of the six poems (Table 1-1) were analyzed by a one-way analysis of variance with repeated measures on the one factor (frames). As seen in Table 1-2 the poetry scores were significantly different across frames (f=2.07, $P<.05$, df=5, 125). The highest mean poetry score (see Table 1-1) occurred in the 10th frame. The mean scores for the remaining frames were relatively similar although there was a slight upward trend resulting from frames 11, 12, and 41.

TABLE 1-2

Summary of Analysis of Variance
on Poems Written to Six Frames

Source	df	SS	MS	F	P
Between Ss	(25)	4737.56			
Within Ss	(130)	6558.67			
Frames	5	500.62	100.12	2.07	.05
Error	125	6058.05	48.46		
Total	155	11296.23			

However, in analyzing students' highest poetry scores which resulted in response to one of the frames, significant gains can be noted. In such an analysis, the mean gain score obtained from the pre-post poetry scores ($\bar{X}d_1$=3.50) was compared with the mean gain score obtained from pretest poetry scores and student highest poetry scores ($\bar{X}d_2$=7.42). Using a correlated t test, a significant difference was found (t=7.49, $P<.01$, df=24). Thus the experimental students best poems were significantly better than their post-test poems. It is to be noted that the best poems written occurred within frames 10 to 54. None of the post-test criterion poems scores resulted in being the experimental subjects' best poem nor the highest score.

Table 1-3 contains the means for the seven components scored for each poem. While no consistent linear trends are evident across frames, there were some gains exhibited between the first two frames (10 and 11) and the last two frames (51a and 51b). Combining the first two frames and the last two frames to obtain two sets of means, the means for the seven score components are as follows:

	1	2	3	4	5	6	7
First two frames	3.78	3.66	3.91	3.62	.70	3.85	4.08
Last two frames	4.17	4.28	4.03	3.97	1.37	4.13	4.24

Thus some positive changes were noted in some of the major components of poems which were emphasized in the self-instructional approach.

TABLE 1-3

Means of Components* Scored for each Poem across Frames

Frames	1	2	3	4	5	6	7
10	4.00	3.75	4.14	3.64	.93	3.86	4.40
11	3.56	3.60	3.68	3.60	.48	3.84	3.76
12	3.64	3.68	3.96	3.80	.92	3.80	3.96
25	4.60	3.90	4.09	3.82	.45	4.27	3.91
26	3.80	3.60	4.60	3.80	1.00	4.00	4.20
29	3.50	3.50	3.50	3.63	.88	3.38	3.50
32	3.93	3.86	3.86	3.79	1.07	3.71	4.21
34	3.82	3.71	3.94	3.59	.94	3.94	4.06
37	3.84	3.53	3.95	3.79	.79	4.00	4.16
41a	3.85	3.69	3.92	3.69	.69	3.85	3.85
41b	3.68	3.82	3.77	3.59	.91	3.64	3.77
41c	3.85	3.85	4.23	3.92	1.31	3.85	4.00
51a	3.81	3.85	3.77	3.65	.85	3.69	3.77
51b	4.43	4.71	4.29	4.29	1.89	4.57	4.71

*#1 = All parts contribute to poem.
#2 = All parts consistent with theme.
#3 = Language pleasing or fun.
#4 = Ideas avoid being trite.
#5 = Utilize effective images.
#6 = Poem a continuous whole.
#7 = Response evoked by poem.

Analyses of Prediction

As stated previously, all students were administered seven Reference Tests for Cognitive Factors for the purpose of determining whether the tests were predictive of poetic skills. The correlation matrix (Table 1-4)

contains the intercorrelations for all independent and dependent variables. The dependent variables were the pre-post difference scores and the high poetry scores from both groups. As noted in Table 1-4, none of the seven tests correlated significantly with the pre-post difference score criterion.

TABLE 1-4

Intercorrelations of Pre-Post Difference Score and High Scores among Seven Reference Tests,[A] Total Score, Modified Total, and Modified Score (N=53)

			TESTS									
	DIFF	HIGH	1	2	2M	3	4	5	6	7	TOT	M TOT
DIFF	100											
HIGH	30*	100										
Test 1	5	40**	100									
Test 2	17	12	22	100								
Test 2M	14	11	35*	83**	100							
Test 3	-20	14	32*	29*	36**	100						
Test 4	-25	34*	27	2	4	31*	100					
Test 5	-20	3	22	20	19	30*	21	100				
Test 6	-6	38**	43**	33*	31*	37**	40**	21	100			
Test 7	6	33*	48**	46**	58**	46**	14	21	44**	100		
Psy Tot	-10	38**	64**	55**	57**	64**	47**	62**	72**	70**	100	
M Total	-10	37*	65**	52**	62**	64**	47**	62**	70**	72**	99**	100

* $p < .05$
** $p < .01$

A = Test 1 Associational Fluency.
Test 2 Associations.
Test 2M Modified scores of Associations.
Test 3 Expressional Fluency.
Test 4 Simile Interpretation.
Test 5 Topics Test.
Test 6 Word beginning and Ending.
Test 7 Vocabulary Test.
Total Total Score of Reference Test.
M Total Modified Total Score which equals 2M + Total Score.

Four tests correlated significantly and positively with the high score criterion. These were tests 1 (Associational Fluency), 4 (Simile Interpretation), 6 (Word Beginning and Endings), and 7 (Vocabulary). The two total scores also correlated significantly with the criterion.

Two step-wise multiple correlations were computed, using as predictors all test scores and as criteria the difference scores and the high scores. The summary of the regression analysis for the difference scores is contained in Table 1-5. The results indicated that the multiple R of .43 was not significant. Correction for bias of the multiple R due to the small sample size was not computed since the multiple R was not significant.

TABLE 1-5

Summary of Multiple Correlation with
Pre-Post Difference Scores as Criterion

Variables (tests) Entered	R	p	RSQ	Increase in RSQ
4	.2523		.0637	.0637
2	.3084		.0951	.0315
5	.3641		.1326	.0374
3	.3933		.1547	.0221
1	.4191		.1757	.0210
7	.4211		.1773	.0017
6	.4220		.1780	.0007
Total	.4258	N.S.	.1813	.0033

The multiple regression analysis with students' high scores as the criterion produced a multiple R significant at the .05 level. (See Table 1-6.) When corrected for bias by applying the Shrinkage Formula (Guilford, 1950) the coefficient of Multiple R was reduced from .57 to .44, which is not significant.

TABLE 1-6

Summary of Multiple Correlation with
High Scores as Criterion

Variable Entered		Removed	Multiple R	p	RSQ	Increase in RSQ	Partial Correlations
Psy 1	3		.4022		.1618	.1618	.40
Psy 4	7		.4680		.2191	.0573	.26
Psy 6	9		.4969		.2469	.0279	.19
Psy 5	8		.5107		.2608	.0139	-.14
Psy 7	10		.5244		.2750	.0142	.13
Psy M	5		.5362		.2875	.0125	-.12
Psy 3	6		.5446		.2966	.0091	-.11
Psy Tot	11		.5574		.3107	.0141	.14
M Tot	12		.5579		.3113	.0006	.03
		Psy 7 10	.5578		.3112	-.0001	
Psy 2	4		.5668		.3213	.0101	.12

$\hat{R}$ corrected = .45 N.S.

Thus single tests appear to predict high pre-post gains, while combinations of tests do not.

Three multiple regression analyses were computed on the data gained from the experimental subjects. In the following analyses the Reference Tests, total score of the Reference Test, and the modified score were all used as predictors with each of the following criteria: pre-post differences, pre-high poetry score differences, and high performance scores.

Table 1-7 contains the intercorrelations for the three criteria and the predictors. For the pre-post difference scores, only Test 4 (Similes Test) related significantly with the criterion. The negative correlation ($r = -.64$, $p < .01$) suggests that the lower the test score the higher the difference score. Test 4 also exhibited a similar relationship with the pre-high score differences ($r = -.50$, $p < .01$). Again the interpretation holds that the lower the Test 4 score, the higher the gain score. The Test 4 relationship with both criteria comes as no surprise since both criteria correlate significantly ($r = .82$, $p < .01$).

TABLE 1-7

Correlation Matrix[1] (Experimental Group) of
Predictors and Criteria (N=26)

	Hi Perform	P-P Diff 1	High Gain 2	Tests 1	2	2M	3	4	5	6	7	Tot	M Tot
Hi Perform	100												
Pre-Post Diff	.82	1.00											
High Gain	.67	.39	1.00										
1	-.01	-.09	.17	1.00									
2	.25	.34	.05	.09	1.00								
2M	.27	.24	.11	.20	.89	1.00							
3	-.17	-.20	-.07	.23	.57	.51	1.00						
4	-.50	-.64	-.17	-.16	-.35	-.35	.09	1.00					
5	-.36	-.29	-.09	.19	.26	.30	.27	.20	1.00				
6	.00	-.17	.36	.35	.07	.04	.29	.34	.31	1.00			
7	.23	.13	.35	.44	.32	.44	.29	-.12	.29	.29	1.00		
Total	-.15	-.20	.22	.55	.44	.46	.55	.21	.73	.70	.61	1.00	
M[1] Total	.14	-.22	.23	.56	.42	.49	.53	.20	.75	.68	.63	.99	1.00

[1]Correlations above .39 significant at .05 level; above. 496 significant at .01 level.

The first multiple regression analysis for the experimental group is summarized in Table 1-8.

TABLE 1-8

Summary of Regression Analysis

Variable Entered	R	Multiple RSQ	p	Increase in RSQ	Partial Correlation
Tests					
4	.6398	.4093		.4093	-.41
1	.6678	.4459		.0366	-.25
7	.6848	.4689		.0230	.20
5	.7046	.4965		.0276	-.22
Total	.7223	.5217		.0252	.22
3	.7603	.5781		.0563	-.34
Total	.7797	.6079		.0298	-.26
2	.7944	.6311		.0232	.24
6	.7976	.6361		.0051	.11
2M	.7980	.6369		.0007	.04
$\hat{R}$ corrected = .66			N.S.		

While the original multiple R is significant, when corrected for bias the R was reduced from .79 to .66, a nonsignificant value. Since the combinations of tests fail to predict the criterion significantly, the best single predictor is Test 4 (Similes), which accounts for 41% of the variance.

TABLE 1-9

Summary of Multiple Correlation with Pre-High Score Differences as Criterion

Variable Entered	R	Multiple RSQ	p	Increase in RSQ	Partial Correlation
Tests					
4	.4978	.2479		.2479	-.50
5	.5648	.3190		.0711	-.31
7	.6268	.3929		.0739	.33
6	.6542	.4279		.0351	.24
1	.6891	.4749		.0469	-.28
3	.7059	.4983		.0235	-.21
2M	.7506	.5634		.0651	.36
M Total	.7542	.5688		.0054	-.11
Psy Tot	.7552	.5703		.0015	.06
$\hat{R}$ corrected = .61			N.S.		

Table 1-8 summarizes the regression analysis with the pre-high score difference used as the criterion. The multiple R is significant (R = .76, P < 05). Corrected for bias, R shrinks from .76 to .61, which becomes insignificant.

The third multiple regression analysis employed high poetry scores as the criterion. The multiple R of .69 failed to achieve significance (see Table 1-10).

TABLE 1-10

Summary of Multiple Correlation with
High Scorer as Criterion

Variable Entered	Variable Removed	Multiple R	Multiple RSQ	Increase in RSQ	Partial Correlation
Tests	Tests				
6		.3644	.1328	.1328	.36
4		.4770	.2275	.0947	-.33
3		.5118	.2619	.0344	-.21
7		.5623	.3162	.0542	.27
5		.5969	.3563	.0402	-.24
Total		.6126	.3753	.0190	.17
1		.6580	.4330	.0577	-.30
	7	.6580	.4330	-.0000	
2		.6846	.4686	.0357	-.28
	6	.6845	.4686	-.0001	
7		.6893	.4752	.0066	-.11
6		.6914	.4780	.0028	-.07
2M		.6919	.4787	.0007	-.04

For the experimental subjects, the best single predictor for either high pre-post gains or pre-high poetry score gains is a low score on Test 4 (Simile Interpretation).

Q-Sort Analysis

Table 1-11 contains the intercorrelations among judges' sortings for the pre-post criterion poems for all subjects. The college judges' sortings exhibited a high significant intercorrelation. The correlations were .70, .69, and .75. The intercorrelations of the sortings of junior high school judges were .25, .12, and .50. Only the first and third correlation coefficients were significant. As is evident, the college judges sortings were more highly similar and reliable than the junior high school judges.

TABLE 1-11

Intercorrelations of Junior High School and College Judges
92 Items Judged (df=90)

High School			College		
1	2	3	4	5	6
1.00					
.25	1.00				
.12	.50	1.00			
.35	-.11	.07	1.00		
.42	.04	.18	.70	1.00	
.33	.02	.39	.69	.75	1.00

$p<.05 = .205$
$p<.01 = .267$

Let us now look at the pre-post criterion poems for both sets of judges for both the Control and Experimental subjects.

TABLE 1-12

Means of Pre-Post Q Sorts
for Judges

Judges
(a)

Junior High School Students

1			2			3		
Pre	Post	Diff	Pre	Post	Diff	Pre	Post	Diff
Control:								
3.65	3.75	+.10	5.15	4.4	-.75	4.80	5.20	+.40
Experimental:								
5.38	5.15	-.23	6.23	4.50	-1.70	5.61	5.03	-.58

Judges
(b)

College Students

1			2			3		
Pre	Post	Diff	Pre	Post	Diff	Pre	Post	Diff
Control:								
4.20	4.10	-.10	4.68	3.90	-.78	4.90	4.36	-.54
Experimental:								
4.76	6.65	+1.89	4.58	6.81	+2.23	4.73	6.62	+1.89

When qualitative changes (plus or minus signs) rather than quantitative changes are assessed, the junior high school judges exhibited greater discrepancies than the college judges. For the Control Group, junior high judges rated the pre-test poems qualitatively better than the post criterion poems. Similarly, for the Experimental Group, these same judges ordered the pre-test poems higher than the post-test poems. The college judges' sortings were in accordance with the scoring scheme. All three judges sorted the Control subjects' post-test poems into a lower category than the pre-test poems, while for the Experimental subjects the reverse was true. Thus, while the college judges' sortings corresponded with the objective scoring system, the junior high school judges' sortings appeared to vary considerably. In terms of overall ratings for the three junior high judges, the first judge rated the poems poor to very good, the second judge poor to excellent, and the third judge very poor to excellent. On the other hand, the college judges were far more conservative in their ratings. The first judge rated the poems from being very poor to good, the second from very poor to fair, and the third judge from very poor to good.

The discrepancy between the two sets of judges may be explained on the basis of the criteria used. The junior high judges stated that poems should express emotions, be phrased correctly, have depth of meaning, have interesting content, and that effort must be expended in the writing. The college judges stated criteria were obviously more sophisticated and considered such factors as uniqueness, logical development of theme, imagery evoked, internal consistency of parts to themes, free from cliches, appropriate use of words, recognition of poetic forms (meter, rhyme, etc.) and the correct use of syntax and images in relation to the themes or concepts developed. All judges were consistent in their evaluation that some or many of the written responses were generally of poor quality. In fact, all judges indicated that many students did not appear to try.

Thus when the impressionistic Q-sort criteria of the junior high and college students are compared, it is apparent that the criteria of the latter conformed more closely to the criteria in the formal scoring system than did the younger students.

Profile Analysis

The analyses in this section are by no means conclusive, but represent an exploratory attempt to determine whether differences in test profiles discriminate some variables of interest in the present study.

The first profile comparison was done between the subjects who had earned the highest poetry scores (top 20%) and the remaining subjects. Table 1-13 contains a summary of the analysis. It should be noted that none of the high performers came from the Control Group. The profile of each group can be seen in Figure 1-1. As seen in Figure 1-1, the profiles of the high and low performers are generally similar. There were some differences, the most noticeable in Tests 7 (vocabulary) and 8 (total score of all cognitive reference tests), but the differences were not significant (see Table 1-13).

TABLE 1-13

	High Performers			Low Performers			
Tests	N	Means	s.d.	N	Means	s.d.	t
1	12	12.75	4.202	41	10.59	3.346	1.859
2	12	6.583	3.554	41	6.195	3.537	.3341
3	12	9.250	4.454	41	8.951	4.141	.2162
4	12	6.250	1.603	41	6.634	3.031	-.4202
5	12	7.000	2.663	41	6.390	3.153	.6083
6	12	18.50	5.535	41	20.17	6.689	-.7883
7	12	18.25	4.634	41	15.49	4.853	1.751
8	12	18.92	4.144	41	15.88	4.781	1.990

The second comparison of test profiles was conducted between the highest student gainers (top 20%) i.e., from pretest to their highest poetry scores. Table 1-14 summarizes the analysis, and the means of the test profiles are plotted in Figure 1-2. Significant differences were noted in Tests 1, 2, and 7 (Associational Fluency, Associations, and Vocabulary) between the high and low gainers (see Table 1-14) and in each case the high gainers means were greater than the low gainers (see Table 1-14). Again, scores of subjects from the Control Group were not included since their scores were not in the top 20%.

TABLE 1-14

Means, s.d.s, and t Ratios of
High and Low Gainers

Tests	N	Mean	s.d.	N	Mean	s.d.	t
1	12	13.00	3.668	41	10.51	3.465	2.160*
2	12	8.250	3.769	41	5.707	3.258	2.296*
2M	12	10.83	4.303	41	8.488	4.032	1.746
3	12	6.583	1.782	41	6.537	3.009	.5104-01
4	12	5.667	2.309	41	6.780	3.198	-1.121
5	12	18.00	4.200	41	20.32	6.908	-1.099
6	12	17.92	4.441	41	15.59	4.955	1.465
7	12	20.42	4.078	41	15.44	4.405	3.497**

*p<.05
**p<.01

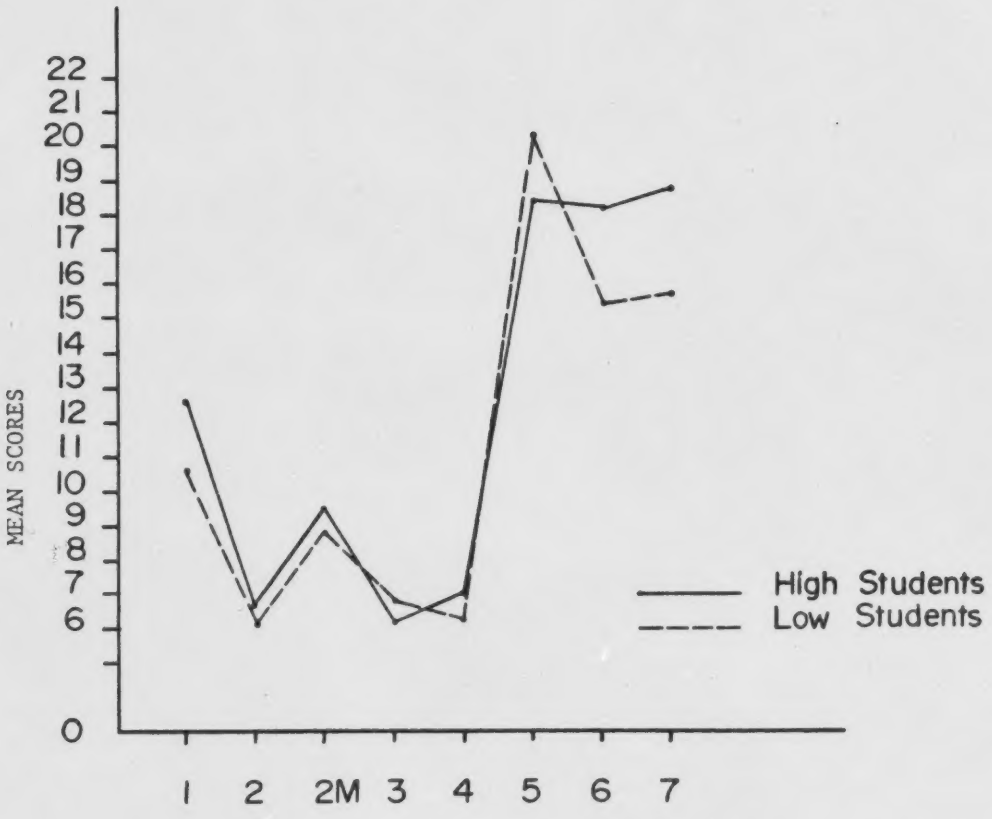

Fig. 1-1. Mean scores for each of the seven Reference Tests for Cognitive Factors plotted across tests for students who earned the highest poetry scores (top 20%) and students who fell in the remaining 80%.

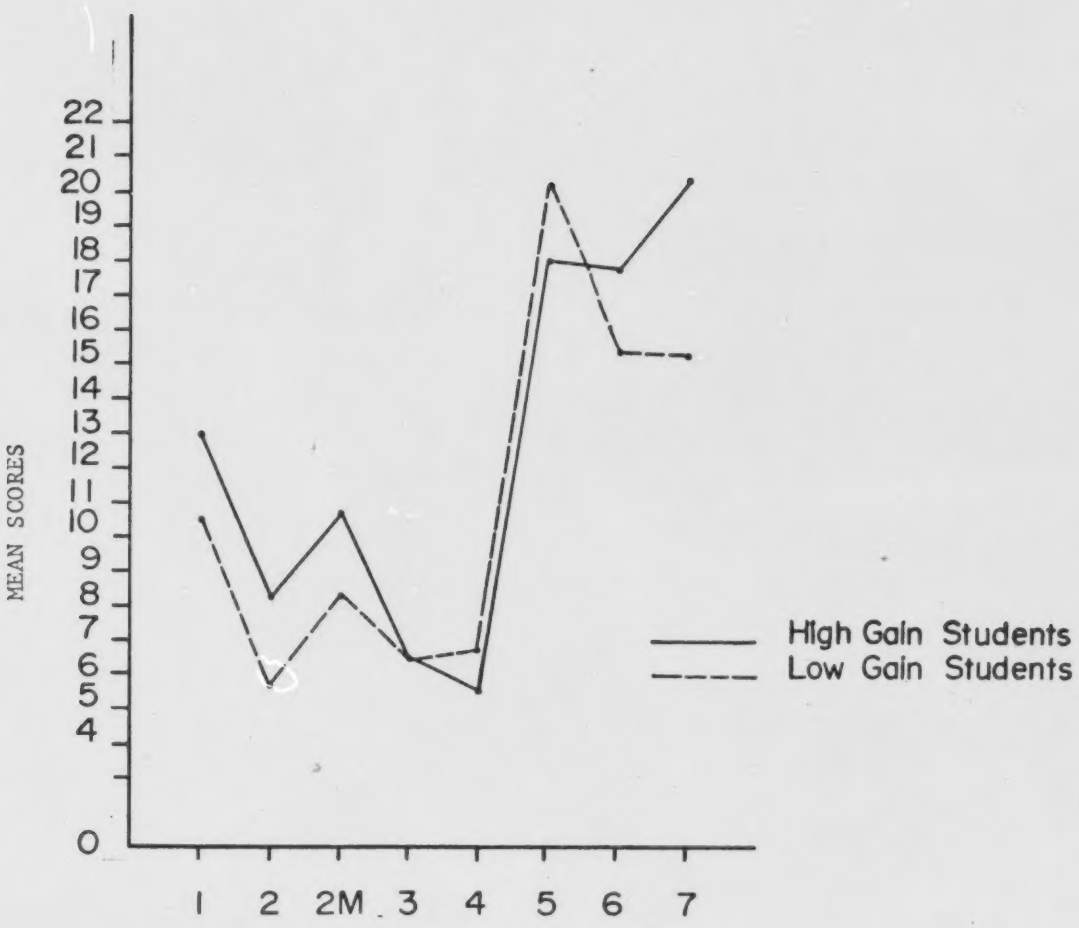

Fig. 1-2. Mean scores for each of the seven Reference Tests for Cognitive Factors plotted across tests for students who earned the highest pretest-highest posttest poetry score gains (top 20%) and the students who fell in the remaining 80%.

CHAPTER 2

LINGUISTIC THEORY AND METAPHOR

We have attempted to program instruction in the writing of poetry including a variety of poetic devices and styles. One of our major concerns has been with the development of procedures for teaching students to write metaphor. This chapter presents our own thinking and that of other writers on taxonomies of metaphor and the acquisition of metaphorical verbal behavior.

Issues and Theory

Should a new theory of metaphor be a linguistic theory? Bickerton (1969) argues that other approaches have been inadequate with respect to providing even an adequate taxonomy let alone account for the process. And Whipp (1967) argues that the attitudes and methods of descriptive linguists are useful to elementary teachers attempting to teach the generation of poetic language even though "teaching kids to employ a given syntactic structure in a given verse form to say a given kind of thing... is potentially dangerous in [some] ways." Whipp argues also that teachers should "explore the possibility of structuring classroom learning situations so that they parallel in structure the situations in which the child's language learning mechanism has been evolved to work."

Bickerton (1969) presents the outline of a view of language within which a linguistic theory of metaphor might be developed. Although he sees this as a field largely neglected by linguists the elements of theory which he treats are based on his own work and that of N. Chomsky, J. J. Katz, J. A. Fodor, P. Postal, and G. Lakoff, among others. Some of the most fertile conceptualizations in Bickerton's article are briefly summarized here:

1. Most non-linguistic approaches to metaphor have been largely unproductive and based on probably false assumptions about language such as "words have fixed and definite meanings," "the meaning of a sentence is the sum of the meanings of the words that compose it." The more general assumption that meaning somehow exists in language is found wanting in Bickerton's analysis. He argues that "le provoca un tinto?" means "would you like a cup of coffee?" to a Columbian and "does a glass of wine make you fight?" to a Spaniard. Which is right? The question is ridiculous. Meaning exists not in the language alone, nor in the speaker or hearer alone, but in the relationship speaker-language-hearer. It is because of the many cases of consensus in our interpretations that we nourish the illusion of "meaning" existing in the language alone.

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2. Metaphors may be regarded as rule-violations and such treatment of metaphor should allow us to disentangle the often highly involved chains of metaphor in poetry on the basis of violations of major-category rules (e.g., hearts that SPANIEL'D me at heels), of sub-category rules (MISERY LOVES company) or of semantic projection rules (the flinty and STEEL COUCH of war). However conventional linguistic theory of generative grammar has not been able to distinguish between metaphor and non-metaphor. For example, "scientists truth the universe" is a major-category violation but it is not a metaphor.

3. An adequate theory of metaphor should probably: be based on a multidimensional grid which is an analogue of the Jakobsen-Halle distinctive feature grid; distinguish between a variety of categories (e.g., literal expressions such as iron bar, black cat; temporary assignments such as green thought, steel couch; and meaningless expressions such as steel mine, procrastination); and account for the history of attribute assignment (i.e., how expressions which must originally have seemed 'metaphorical' have now come to be accepted as nearly completely literal such as 'loud color') and the prediction of attribute assignment.

   But the difficulties of a linguistic theory of metaphor are enormous. Thus we speak of wounding someone's pride but not scratching someone's pride. Both expressions are linguistically identical and the differences cannot be accounted for by any of the theory presented by Bickerton. And yet though the latter expression seems meaningless it could probably be made reasonable by context. Thus, Bickerton's "Prolegomena to a Linguistic Theory of Metaphor" is suggestive of elements but not currently powerfully helpful for the practical work of building instructional systems for producing written metaphorical behavior in children.

In view of the limitations of a linguistic theory of generative grammar for producing metaphor always distinguishable from literal or meaningless statements, our approach has been oriented toward the use of whatever linguistic paradigms seem helpful for generating "possible metaphors" and working them into "poetic metaphors." In the final analysis we have only been able to assist the writer in finding possibilities, leaving to him much of the task of judging their appropriateness and aesthetic quality.

We did use a fairly systematic approach to developing our programing although we have not yet fully exploited our findings. The procedure was somewhat as follows:

1. A preliminary search was made into the form of metaphor in English poetry. This was accomplished through a cursory reading of 1,000 poems in anthologies of children's poetry. Occurrences of anything which might be considered as metaphor were noted.

2. The patterns derived by Step one were submitted to a linguistic analysis.

3. A theory of linguistic relationships, the feature system, was selected to account for the metaphor patterns.

4. Possible variations of types of metaphor were identified and a definition written which would account for all occurrences.

5. A program was designed to get students to produce metaphors.

6. The program was refined a number of times based on individual tryouts.

A Preliminary Linguistic Theory of Metaphor

In order to define metaphor while trying to show relationships which exist between types of metaphors it is necessary to use certain conventions of linguistic theory. In the context of this analysis some of the basic terms used will be:

1. Lexical relationship: any case of identity of all or some semantic or syntactic features between lexical items.

2. Syntactic relationships: those which are not based on meaning or phonology and exist within a discourse, usually including items which have different base structures but the same surface structure.

3. Feature: units of syntactic or semantic significance which are determined by syntactic constructions and semantic inferences and are used to specify lexical entries. (Note: features do not necessarily give a referential 'meaning' though they may correspond to that meaning.) For example there are no features necessary for an isolated lexical item 'man' but if we introduce the item 'dog' then we will have to give some features which will show (1) the relationships and (2) the contrasts. In this case I could use the feature [+ human] (+ means the lexical item has the particular feature) so,

'man' could be written $\begin{bmatrix} \text{man} \\ + \text{human} \end{bmatrix}$ and

'dog' could be written $\begin{bmatrix} \text{dog} \\ - \text{human} \end{bmatrix}$.

Another feature could be added to show a relationship (or identity of features) such as [+ animate] thus,

$$\begin{bmatrix}\text{man}\\ +\text{ animate}\\ +\text{ human}\end{bmatrix} \quad \text{and} \quad \begin{bmatrix}\text{dog}\\ +\text{ animate}\\ -\text{ human}\end{bmatrix}$$

(Note: in the first case $\begin{bmatrix}+\text{ human}\\ +\text{ animate}\end{bmatrix}$ is redundant.)

This system of feature analysis was first proposed by Roman Jakobson of Harvard in Preliminaries to Speech Analysis and earlier works as a method of analyzing the phonetic system of a language. It was later used by Chomsky in Aspects of the Theory of Syntax (1965) as a method of differentiating items in the lexicon which could then be inserted in the Phrase structure generated in the Base component. Using the relationships suggested by feature analysis plus the relationships on the syntactic level such as the types of manipulations used by Chomsky to show that the passive is related to active sentences it may be possible to understand not only different types of metaphors but also certain relationships which can exist within the types and even between types.

Syntactically related lexical items can be those which appear in the same surface constructions; phrases, sentences, or discourse. On the sentence level they are often subject-complement, subject-verb or other type of relationships.

Metaphor will tentatively be defined as syntactically related lexical items that share one or more lexical features which would not normally be expected to co-occur and which evoke an image which is a composite of the two feature matrices. The composite feature matrix will assume those denotative features which are present and marked plus and the connotative features which are unmarked but present in the head item and the connotative and denotative features which are marked plus in the contributive item.

$$\begin{bmatrix}\text{A}\\ +1\\ +2\\ \pm 3\\ \pm 4\\ \dots\end{bmatrix} = \begin{bmatrix}\text{B}\\ -1\\ -2\\ +3\\ +4\\ \dots\end{bmatrix} \qquad \begin{bmatrix}\text{MM}\\ +1\\ +2\\ +3\\ +4\end{bmatrix}$$

(denotative features will be considered those which specify A or B as a lexical entry. Not all these are known because they depend on a complete theory of semantics.)

A = head item
B = contributive item

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MM = metaphorical matrix
Basic formula for metaphor A = B $\longrightarrow$ MM

The MM can only assume + and ± features of A and + features of B in order to have a metaphor some of the denotative features must not ≠ in this case [A, +1] and [B, -1], etc.

The MM can be further used in a metaphor.

A simile would modify this formula:

A is like B $\longrightarrow$ A + MM

A assumes the features of the MM but also retains identity as A.

A + MM can also be used as a unit to continue the metaphor.

The underlying relationship A=B can be transformed (hopefully) into other types of metaphor.

One obvious problem is the selection of features for A and B. This is probably left to a number of factors among which are:

1. context in discourse

2. intended meaning of the MM.

Poetic Metaphor occurs when the image evoked by the composite features contributes to an overall meaning of the discourse (poem). Poetry could be termed artificially constrained symbolic human language. The types of constraints which exist are not fully specified for all languages but involve the things commonly referred to in English as: meter, versification, rhyme and imagery including metaphor. Symbolic human language is that in which meaning is evoked at more than one level.

Example (1) 'My love is a rose.'

love	rose
+ animate	- animate
+ human	+ emotion
+ emotion	+ beautiful
+ beautiful	...
...	

If this sentence is considered a metaphor the denotation of the term 'love' must have the above features [+ human], [+ animate] and could possibly have the connotative features [+ emotion] and [+ beautiful]. When the two lexical items are syntactically related by the sentence (1) then 'love' can assume the positive features [+ emotion] and [+ beautiful] of 'rose.'

Example (2) 'I am a rock'

I
+ human
...

rock
- animate
+ strong
+ hard
+ etc.
...

Note the redundant relationship [+ animate] $\longrightarrow$ [+ human].

Here the pronoun 'I' assumes the features of the lexical item 'rock' by the co-occurrence in the copula sentence # NP Cop NP #. It can be seen that there is no implied physical identity between 'I' and 'rock' but that there is a definite sharing of features.

Another problem of the formula A = B is that the resulting MM may only exist on the explicit level. There is also a type of metaphor which can be characterized by the following formula:

(1) $[A, B, C, D]_X$ M = metaphor

(2) $X \longrightarrow M$

where [A, B, C, D] = a string of sentences or phrases which constitute a poem and X = the sum of their meanings. The type of description necessary to specify when $X \longrightarrow M$ is not available.

It may be argued that a metaphor exists only on a semantic level and that there is no syntactical distinction between (1) 'My love is a rose' and (2) 'My love is a girl' but that (1) is a case of the violation of selectional rules. "Sentences that break selectional rules can often be interpreted metaphorically...or allusively in one way or another, if an appropriate context of greater or less complexity is supplied. That is, these sentences are apparently interpreted by a direct analogy to well formed sentences that observe the selectional rules in question." (Chomsky, 1965, p. 149).

It is probably true that the metaphor does exist on the semantic level but within the syntactic limits. A metaphor may also be examined from the point of view of the poet or the point of view of the reader. The poet extends a MM through his choice of words and phrases. The reader gives an interpretation of this MM which may contain either more or fewer features than the poet intended.

/// = shared meaning.

P = poet, MM = metaphorical matrix, R = reader.

Metaphor may also be united with other poetic constraints such as assonance, alliteration, etc. to reinforce the image of the MM. Because of the operation of the metaphor on more than one semantic level, to say that the complete meaning or implications of the MM is equal to the simple sum of the meanings of the individual features would be a denial of these levels.

A possible extension of the basic pattern developed for the metaphor is suggested by the article by Jean Cohen "La Comparaison Poetique; Essai de Systematique" in the journal Languages. The object of his article seems to be the development of various simile patterns based on the basic pattern 'A is B like C' (The earth is round like an orange). The following chart was given by Cohen to show the relationships which may be inferred from the various forms in which the simile appears in text material (poems) given in the article.

	I Ellipse	II Impertinence (?)	III Internal Redundance	IV External Redundance
1.	= AB	$B \neq C$	$B = C$	$C = A$
2.	= AC	$B \neq A$	$A = B$	$C < A$
3.	= BC	$A \neq C$	$A = C$	$C = O$

The chart was illustrated with the following sentences:

I. - The earth is round like...
   - The earth is like an orange.
   - ...Is round like an orange.

II. - The earth turns like an orange.
   - The earth dies like an orange.
   - The earth is blue like an orange.

III. - The earth is round like the earth.
   - The earth is round like something round.
   - Something round is round like an orange.

IV. - (?) I do not understand this example or category.
   - The orange is round like the earth.
   - (The idea behind this is possibly) The earth is like

All of these examples deal with variations of the simile pattern and do not try to differentiate between the simile and the metaphor or any other image pattern.

One possible characterization of the relationship between the basic patterns is the following list of sentences:

The sea is calm (etc.)
Death is calm (etc.)

The sea is calm (etc.) like death is calm (etc.).
The sea is calm (etc.) like death
The sea is like death.
The sea is death.
The deathly (or death-like) sea...
Death (meaning the sea).

A generalizing diagram of the list of sentences could be the following:

1.	A is B like C is B	$\longrightarrow$	A + B + MM
2.	A is B like C	$\longrightarrow$	A + B + MM
3.	A is like C	$\longrightarrow$	A + MM
4.	A is C	$\longrightarrow$	MM
5.	The C-like A	$\longrightarrow$	MM + A
6.	C (meaning A)	$\longrightarrow$	MM (C)

A = head item.
B = features common to A and C.
C = contributive item.
MM = metaphor matrix

These are not to be understood as formulas but as characterizations of patterns which exist within poetic language. The results of the metaphor to the right of the arrow simply is a method of notation to show what I feel the relative emphasis of the variations to be. For example #4 seems to be the most direct type of metaphor so the entire image seems to be carried by the metaphor matrix whereas 1 and 2 preserve more of the idea of the basic parts of the comparison. In 6 the whole metaphor is carried in context so that even though there may be some features from A preserved in the MM most of the image is wrapped up in the images provided by C. A characterization of #1 could be paraphrased as: A has the set of features B which are similar to some of the features of C.

Examination of a large number of metaphors indicates that they seem to participate in two basic patterns, the first, by far the most common, will be termed simply metaphor, the second is the verbal metaphor.

In order to show the relationships which exist within the system of common metaphor the most basic example given in previous pages was:

(1) A is B like C is B.

where A = head, C = contributive item and B = one or more features in common between A and C expressed as either an adjective or a verb. Examples of this basic type of metaphor are:

(2) The wind is spooky like a ghost is spooky.

when an adjective is used, and:

(3) You are gone like the dew is gone.

for when a verb is inserted. In all cases the verb used cannot violate the selectional restriction rules which determine its co-occurrence with the head noun.

It may be that certain adjective constructions which evoke a metaphorical image are derived from this basic pattern, for example:

(4) The C-like A

which can be demonstrated by the sentence:

(5) The ghostly wind...

Not all adjectives suggest any type of metaphor, of course, so there must be some underlying difference between the type of adjective construction which allows a metaphorical interpretation and the kind which does not. This can be explained by supposing that the metaphorical adjectives are derived from underlying metaphors.

The verbal metaphor seems to be unrelated to the adjective types except in the sense that they both create a metaphorical image through the sharing of features. In the case of the verbal metaphor there is always a degree of violation of the selectional restriction rules on verbs. The greater the degree of violation the more difficulty is encountered in interpreting the sentences. A contrast between a verbal metaphor and a common metaphor which has a verbal feature can be seen in the following two sentences:

(6) You are gone like the dew is gone.

(7) I soar, I am a hawk. (Shakespeare)

Examination shows that when the first segment of the comparison in sentence (6) is given as a statement there is not even an implied metaphor:

(8) You are gone.

but in the second case due to the violation of selectional restrictions the simple sentence evokes either an imaginary idea (in the very least) or a metaphor:

(9) I soar.

Even though there is a separation of the verbal metaphor from the general type it seems to work fairly well in the paradigm on page 2-7:

I soar like a hawk soars.
I soar like a hawk.
I am like a hawk.
I am a hawk.
Hawk-like, I...
A hawk (meaning me)

(The above is almost a case of reverse personification, the main difference being that 'I soar' retains the idea of a metaphor whereas 'The sea is calm' does not.)

Another interesting problem is that of the sustained metaphor. It seems that once either an adjective or verbal metaphor has been created within a poem then the poet can act as if the domain of the metaphor is a 'new' reality. The new reality can be created at any level of interpretation of the metaphor no matter how vague until the reality becomes 'unbelievable'. There are always within a single metaphor multiple levels of interpretation. All of the various levels of interpretation considered at once constitute a metaphorical field. A good example is the passage in Shakespeare's As you Like it which begins: "All the world's a stage..." There seems to be no limit to how far the extension can go in one level of interpretation. The existence of a metaphorical field is a definite problem to the establishment of a semantic theory because the meaning becomes to a large extent what is intended rather than a literal representation of reality. The idea of a metaphorical field also supports the feature model of semantics. For example once the main metaphor has been stated the 'new' reality incorporates a set of rules which change features on the original head noun so that the rest of the sustained metaphor assumes these new features as fact. In effect in the Shakespeare example: "All the world's a stage..." the lexical item 'world' has its features changed so that in the rest of the discourse it has the same features as 'stage' but in the metaphorical sense is still understood as 'world'. A metaphorical field can be created with either what has been called a simile or a metaphor, but in any case where one or more features are specified it does not seem that the comparison can be extended.

It may turn out that the permitted metaphor interpretations are determined by the available syntactic and semantic relationships within the individual languages. In which case the particular language determines, to some extent, the existence of metaphors.

A minor type of metaphorical pattern is what can be called the reiterative metaphor which is a list of metaphors with a repetition of the head item.

The two basic metaphors can also be modified through negation such as:

(10) The boy is not an eagle...

The negation shows which of all the possible features of the head item are not going to be considered as a part of the metaphorical image and yet in order to be understood it seems that the metaphor must be made before the negation takes place.

The types of patterns which have been found to exist in 47 poems using metaphor and simile can be organized into a pattern. I will give a list of metaphors selected from the 47 poems with a characterization of its form in the same type of notation as used in the first part of this study. The organization will be according to the paradigm on pages 2-7 and 2-8.

Patterns of common types of metaphors:

1. a. (No example was found) A is B like C is B.

   b. Lawn as white as driven snow... A is B like C.
   "The Peddler" William Shakespeare.

   c. My heart is like a singing bird... A is like C.
   "The Birthday" Christina Rossetti.

   d. The moon's a peck of corn... A is C.
   "The old horse in the city" Vachel Lindsay.

   e. A swan-like form invests the hidden thorn... The C-like A.
   "The Snow Storm" R. W. Emerson.

   f. A spotted shaft is seen... C (for A).
   "A narrow fellow in the grass" Dickinson.

The relationships between the types of verbal metaphors is not quite as easy to develop as the more common metaphor. The only type of verbal metaphor which fits into the pattern is:

2. a. No example.

   b. The north, as a friend, maketh all again clear... A, B's like C.
   "The Winds" Thomas Tusser.

If the verbal metaphor is made to follow the pattern further then it ceases to be verbal because the verb is deleted. The verbal metaphor therefore becomes one of the potential ambiguous bases for common metaphors.

A major variation in the verbal metaphor type is the example:

(11) When I bestride him, I soar, I am a hawk...

in which the comparison has been deleted. Another variation in the form is the type:

(12) "The grass divides as with a comb..."
(Dickinson)

which could have a variety of underlying relationships:

- The snake divides the grass as a comb divides hair.
- The grass divides with the snake like hair divides with a comb.
- The grass divides as if a comb were dividing it, etc.

Other types of variaitons:

- Negative metaphor
  "He wandered over the foreland hill and returned in the evening,
  asking for death,
  not like a beggar,... A is not like C.
  "Hurt Hawks" Robinson Jeffers.

- Compound subject metaphor (embedded sentence)
  "... When
  a busy robin and a wren
  are syllables of ecstasy..." A and D are C.
  "Why read a book?" Burns.

- Negative metaphor (adjective or simile).
  "To see you, a boy's prize, (frog)
  no bigger than a rat..." A is not B like C.
  "Bullfrog" Ted Hughes.

- Deleted subject.
  "cross as switches..." (A) is B like C.
  "Cat on Couch" Barbara Howes.

- Common metaphor which uses a verb which does not violate any selectional restrictions:
  "the whining school boy...creeping like a snail...
  A is B like C.
  "As you like it" Shakespeare.

- Reiterative metaphor (repeated head item).
  "Youth like summer morn, age like winter weather
  Youth like summer brave, age like winter bare.
  "The Passionate Pilgrim" Shakespeare.

- Reiterative metaphor (repeated contributive item).

"Like the dew on the mountain
Like the foam on the river
Like the bubble on the fountain
Thou art gone, and forever."

"Coronach" Sir Walter Scott.

Another problem which does not have a ready solution is that of the metaphor based on an image, (sort of a symbol of a symbol). An example of this is:

"Once my heart was a summer rose."

"Song" Dame Edith Sitwell.

"Summer rose" has a symbolic base as well as a reference to a concrete reality. The metaphor works on a symbolic as well as a "real" level. Logically it would be possible to have the following types of relationships:

$$\begin{matrix} A = R \sim X \\ B = R \sim X \\ C = R \sim X \end{matrix} \quad \text{in} \quad \left\{ \begin{matrix} A \text{ is } B \text{ like } C \\ A \text{ is } C \\ C \\ \text{etc.} \end{matrix} \right\}$$

A = head, B = shared feature, C = contributive item, R = reality, X = unreal or symbol, any symbol or symbols not meant to represent reality.

Suggestions for Programming Instruction in Metaphor Writing

Before starting to vary or construct metaphor patterns the subject is asked to write a page or so of prose about any subject which is interesting to him or which he likes or dislikes. If this is not sufficient to start the student writing then he is asked to write on something he has done lately or seen. If he stops after writing for a short period he is told to write something that what he has already written suggests, or describe something he has written about. A variety of stimuli are presented to elicit the writing including pictures and music.

I. Developing metaphors from word lists in steps to a series of common metaphors.

Set A. Instructions:

1. Look at what you have written and choose some names of objects or things or events that interest you; like 'house', 'swimming',

'summer', or 'playing basketball'. List these down in a column along the edge of your paper.

house
swimming
summer
playing basketball.

2. Make a list of different descriptive words or qualities and characteristics that describe the words already listed; such as smells, colors, size, shape, tastes, sounds or feelings. List these next to the names you have listed already, one different descriptive word to each name. For example a 'house' could be described as 'white'.

	color	size	shape	taste	sound	feeling
house	white	big	square	---	creaky	comfortable
swimming, etc.						

3. Choose one descriptive word from each name, list them in another column and give other names of things which could be described by those words. For example the descriptive word 'white' could also describe 'snow'.

white - snow
big - elephant
etc.

4. Make a list of sentences which are comparisons using the names and descriptive words in the form: The (name from first list) is (descriptive word) like the (name from second list). For example if you chose the word 'house' from the first list then you would choose the words 'white' and 'snow' from the other lists to make a sentence like:

The house is white like snow.

Or if you started with the word 'yard' then you would end up with the sentence:

The yard is big like an elephant.

Set B. Instructions:

1. Choose one other name or idea from what you have already written such as the word:

gun.

2. Write down all the possible smells, colors, sounds, shapes, feelings, sizes or tastes that the word suggests to you. List these descriptive words in a column below the name or idea which you have chosen like this:

gun
loud
metallic
shiny
kills things

3. Write down to the side of the column any other words which the column of descriptive words could suggest. The word 'loud', for example, could also suggest 'thunder'.

loud - thunder
metallic - railroad engine
shiny - sun
kills things - poison

4. Re-using the name or idea selected as the first word, write sentences which compare them with the other two words. So that if you choose 'gun' as your first word then the comparison would be:

A gun is loud like thunder.

If at any time you think of a better word to use in the comparison then use it instead.

Set C. Instructions:

1. Copy the following list of types of descriptive words and write descriptive words which the list suggests to you including some you may have used before:

Kinds of colors: red, blue, yellow, white
sounds - loud, etc.
smells
tastes
shapes
sizes
feelings (inside)
feelings (outside)

2. Choose a particular descriptive word that you like and name all the things which it could describe, such as the word 'red' which could describe the following:

stoplight
fire engine
rose
blood.

3. Pick any two of the things listed and use them in a sentence which compares them using the descriptive word you have chosen. For example:

   A stoplight is red like blood.
   A fire engine is red like a rose.

4. Choose another descriptive word from the list and write a comparison sentence using it.

Set D. Instructions:

1. Make a list of at least 10 things which are related in some way but are not alive. Put them in a column and label it List 1.

2. Make another list of things which are parts of animals or people and label it List 2. Put this list beside List 1 but leave a space between them.

3. Make a list of actions that the words in Lists 1 and 2 could both do. For example:

mountain	shake	hand
rock	stick out	nose
stream	wag	tail
drunk	stagger	calf

4. Make a list of sentences using words from List 1 and the words from List 2 and their actions in this way: The (word from List 1) (action) like (the word from List 2). For example if you chose the word 'mountain' from List 1 then you could choose the words 'shake' and 'hand' from List 2 and the action words to make the sentence:

   The mountain shakes like a hand.

II. Creating metaphors from declarative sentences.

Set A. Instructions:

1. Make a list of simple sentences of the form: The (name of a thing) is (some descriptive word; either size, shape, sound,

smell, taste, color or feeling). For example you could select the word 'tree' and the size 'tall' to make the sentence:

The tree is tall.

2. List each of the descriptive words in the sentences in a column and think of something else they describe, different from the words used before:

tall - my father.

3. Make the list of names and descriptive words into sentences of the form: The (name) is the (descriptive word). Some examples could be:

My father is tall.
The paper clips are small.
The feather is soft.
etc.

4. Compare the two sets of sentences in this form: The (name) is (descriptive word) like (name) is (descriptive word). Some examples could be:

The tree is tall like my father is tall.
Mice are small like paper clips are small.
The cat is soft like the feather is soft.
etc.

5. Take off the second descriptive word in the sentences so that the form of the sentence is: The (name) is (descriptive word) like the (name):

The tree is tall like my father.
Mice are small like paper clips.
etc.

Set B. Instructions:

1. Select one of the comparison sentences which has some appeal to you and change it according to the following pattern, filling in the blanks with an appropriate word:

My grass is soft like a kitten.
My NW is soft like a kitten.
My NW is soft like a NW .
My NW is NW like a NW .

2. Repeat the pattern. For example:

My grass is soft like a kitten.
My rabbit is soft like a kitten.
My rabbit is soft like a feather.
My rabbit is light like a feather.
The snow is light like a feather.
The snow is white like a feather.
etc....

III. Write a poem.

Choose one of the comparison sentences you like and write a poem using a specific model (i.e., a given number of syllables per line, rhyme scheme, etc.). See for example, the one below which is a Tanka form with the major constraint being a 5, 7, 5, 7, 7, pattern of syllables per line and no specific constraints on rhyme or other poetic devices.

Twisted cyprus face
No speed or splendor graced her
As she moved to see
The label on the bottle
Was it lemon in her tea?

IV. Suggestions on revision.

Somewhere between the initial impulse that drives the poem and wherever it ends up in finished form there is a process of revision. We don't fully understand that process any more than we can fully even describe or account for metaphor, let alone teach its production in poetic forms. But there are some linguistic devices that can be used to help in matching whatever model the writer is trying objectively or subjectively to imitate. The writer revises to get whatever effects he wants with alliteration, meter, rhyme (internal and end) assonance, consonance, non-trite phrasing, and so on. In the process of such revision, in order to maintain his metaphors he will have to modify and extend them, for example to fit constraints of meter or to add the necessary context that makes the metaphor believable and the original idea come alive for the reader.

Thus in one poem, the original line was "the drunk staggered like a new-born calf." In the poem the drunk changes to a dying man, the word stagger disappears and considerable context is added to make the metaphor believable.

We have no infallible rules for this kind of revision. One help however is to practice all kinds of variations. Thus, for the Tanka we need a 5-syllable line to begin and the total pattern must be 5, 7, 5, 7, 7. The original poem was written as follows:

No speed or splendor graced her (7)
As she moved (3)
She clutched the bottle (5)
Her *face twisted like a cyprus* (8)
Was it lemon in her tea? (7)

The syllables per line as it stands above are: 7, 3, 5, 8, 7, and it must be 5, 7, 5, 7, 7.

In order to make the necessary revision in syllables-per-line the writer experimented with changing the syllables per line to get the right pattern and eventually settled on a new beginning line. Thus, "Her face twisted like a cyprus" became "Twisted cyprus face" and also became the first line though it could have been "Her face is like a cyprus"(7 syllables). Through a process of changing word order, omitting words and changing lines you may succeed in getting the sounds to come out smooth and fit the constraints you set up as the writer.

The Computer and the Poet

We have not yet had the resources for extensive work on the design and testing of problems for the computer as a research tool in teaching the writing of poetry. But we have made a beginning in the design stage which points to a different direction than that taken by the major workers in "computational stylistics." Our own intent originally was to use the computer to help us test algorithms for the production of poetic devices such as metaphor, alliteration, etc. Thus, the extensive linguistic analysis of metaphor above was the preliminary stage of this work. We reasoned that if we put in the appropriate corpus of resource materials tagged according to our retrieval needs for the algorithms designed, we could use the computer to generate "possible strings of metaphor" to be printed out for subjective analysis by the poet in the process of creating a poem. An illustration of this process is presented below. First, however, we refer briefly to the most significant technical work in this field that has come to our attention.

Two publications by Sedelow, Sedelow and Ruggles (1964), and Sedelow and Bobrow (1964) outline the concept of stylistic analysis and its applications, describe a computer program for use in stylistic analysis, and present a bibliography, and Bailey and Burton (1968) present what was perhaps the most comprehensive bibliography on stylistics at the time of its publication.

Stylistic analysis is the study of structural patterns formed in linguistic units among natural language strings. "Computational stylistics" is the term used by Sedelow, Sedelow and Ruggles (1964) to refer to quantitatively rigorous studies of style in natural language. Prior to

the use of computers the detection of such patterns in a data base of substantial size was not only difficult and time consuming but also unreliable. Apparently the greatest deficiency in current work is the discovery and rigorous definition of useful analytical categories. Previous work cited by Sedelow, Sedelow and Ruggles (1964) has been directed primarily to problems such as the non computer study by G. Udny Yule of noun frequencies in The Imitation of Christ; the manual analysis of the Federalist Papers by Douglass Adair to determine authorship; the more recent computer analysis of the Federalist Papers by Mosteller and Wallace who found that those written by Hamilton and Madison could be discriminated on the basis of the frequency of function words such as "by", "upon", and "to"; the pre-computer work of Berelson in content analysis of text to determine individual emotions or policy indicators of propaganda materials; and a technique by Lauren Doyle for using the computer to construct maps of word associations. Sedelow and Bobrow (1964) describe a program which will answer questions such as: What are the content words which provide the major organizing concepts for the text?, How are the major content words connected with each other?, Does a hierarchy exist among the organizing concepts?, Are the concepts clustered together at the beginning or end of the text?, Are there overall patterns of function words? If patterns of rhythm are indicated, do particular rhythmic patterns appear in particular kinds of texts or in particular sections of a given text? The authors see this work as contributing to providing clues as to individual styles of word usage, normative usage and the development of algorithms for use in machine production of language.

We have explored similar lines in our preliminary work. Thus a corpus of twenty poems (10 heavily using poetic devices such as assonance, alliteration, metaphor and 10 of a more simple variety) was converted to phonetic spelling and stored in the computer. Analysis of assonance and alliteration was conducted. The output included data such as the ratio of vowels to consonants and the ratio of percent of second degree assonance to second degree alliteration. Second degree assonance was defined as the occurrence of similar sounds in two accented vowels that are separated by only one nonsimilar accented vowel and consonants or unaccented vowels but not by more than one nonsimilar accented vowel. (e.g., pounds and crowns). For example, the ratio of second degree assonance to second degree alliteration was 13/6 (or 2.2) for A. E. Housman's "When I was One and Twenty" and 17/3 (or 5.7) for Dylan Thomas' "Light Breaks Where No Sun Shines." And in general Thomas' poem has a higher ratio of assonance to alliteration ranging from 1.3 to 20 as compared with .8 to 2.2 for comparisons all the way from second degree to sixth degree. However our concern was not to identify individual styles of authors as such but rather to develop and test algorithms for these aspects of style and test their utility in discriminating significant styles among poems which may be considered "good" though of quite different styles.

This line of work appeared to us nonproductive for our major concerns or at least of lower priority. Thus our current plans are to use the computer more as an aid to the writer in the actual process of writing. We

are not interested in having the computer write poems; this of course has been done. What we are interested in is the question: what can the computer do to speed and make more effective the process of writing, leaving as much as possible to the individual creativity of the writer? An analogy to the computer-organ project at the University of Utah computer center may clarify the question. An organ keyboard is wired to the computer. A composer may write a melodic line in one time and key properly orchestrated to suit himself. This may be programmed quickly and stored in the computer memory. He then may with a very simple command tell the computer to play it back in its original form, in a different key, in a different time, etc. He then may of course use his own judgment in deciding how to revise his composition. Thus, the act of creation is still largely in the hands of the composer who uses the computer to do what it would take much longer for him to do or in some cases what he cannot do or does not want to learn to do, or in other cases what he may learn to do (at least hear or discriminate) after the computer has done it for him a number of times.

To illustrate how we would propose to use the computer as a tool for the poet we shall take as a text a verse from Dylan Thomas' "There Was a Saviour."

There was a Saviour
Rarer than radium
Commoner than water, crueller than truth;
Children kept from the sun
Assembled at his tongue
To hear the golden note turn in a groove,
Prisoners of wishes locked their eyes
In the jails and studies of his keyless smile.

How did Dylan Thomas move from whatever was in his heart, head or notebook to the first verse of this poem? We will probably never know if ever it could be known. But because of the richness of metaphor and simile we shall use it to illustrate how a poet might make use of a computer in the process of writing a poem.

Suppose that you were the poet and that you began that verse with the following notes:

Children kept out of the sun by parents
locked in with a key
wished to go out
to hear the Saviour
and when they did
they looked at Him as though
hypnotized
so captivated were they
by his voice and smile.

You want to make metaphor and the computer is available as a tool to use in following some of the algorithms described above under "Suggestions for Programming Instruction in Metaphor Writing." We will present a few examples here to illustrate the process.

There are at least three kinds of uses of the computer in connection with the writing of poetry as we have conceptualized it. They are illustrated here:

1. Finding a word of a specific class that alliterates with another word or is in assonance or consonance with another word. For example, suppose you wanted to say "rarer than _____" and the word you are searching for must begin with "r" or have an "r" in the initial digraph and it must be a "mineral" and be "rare." It would not be difficult to have a thesaurus in the computer to allow such a search and print-out to come up with "radium" among other terms.

2. Finding words with high association value for a selected metaphor to help you in writing the context that makes the metaphor "happen" or be "believable" or "come alive." Thus, suppose you selected the metaphor "children are prisoners." So you search the thesaurus with the term "prisoner" as the descriptor. And your print-out gives you lock, key, bar, jail, etc. We do not propose how you would use these to make your context, but simply that rapid access to a set of words associated with a metaphor will allow you to try out more metaphors and give you more associations to work from. In the case of Thomas' poem his own search however it was done allowed him to write about children listening to the Saviour:

   "Prisoners of wishes locked
   their eyes in the jails and
   studies of his keyless smile."

3. Finding a metaphor. Sometimes you have a subject (e.g., children) for which you want to find a metaphor. So you use the algorithm which suggests that you list associated ideas describing the subject or tenor of the metaphor. In this case the word you select as a descriptor to use as a search tool in the computer is "locked." Using this term you ask the computer to search in the thesaurus for all nouns associated with this term that are also names or titles of persons. The print-out gives you: jailer, prisoner, warden, inmate, judge, etc. Using this possibility and the idea that "the children are locked in wanting to get out" you come up with "children are prisoners of wishes."

Thus we conclude this section on the computer and the poet and the chapter on linguistic theory and metaphor. Our next steps on computer work will be to put a corpus of material in the computer representing selections from an encyclopedia and related terms in Roget's Thesaurus tagged appropriate to our retrieval needs and then experiment with a variety of algorithms for writing poetry or more specifically for giving the poet rapid access to material which he might make into poetry. Beyond that, we shall also experiment with the algorithms themselves without the computer.

CHAPTER 3

COURSE MODEL

Procedures for Construction of Course Materials

We have outlined eleven basic steps in the construction and validation of an instructional sequence or course. This model will be useful to you if you plan to construct a course or instructional sequence or revise an existing one. The model is procedural; that is, it describes things for you to do at each step. Each step will ultimately be treated on three levels: General Description, Procedural Guides, and Illustrations of Procedures. However, at the present stage of development, several of the steps may omit one or another of these elements. The model is linear and recycling. That is, it is intended that you proceed linearly in sequence through steps 1, 2, 3, 4, thru 11. However, at points you will need to make a loop back a few steps or recycle. Try applying each step to a problem of your own. This model is not intended to be entirely self-instructional. It should, however, clearly guide and prompt initial drafts for each step you take in developing some of your own instructional procedures and materials. See Figure 1 for a chart presenting an overview of the system.

Step One: Rough Statement of Goals

General Description.--Rough statement of instructional goals. This is a statement of aims based on the first intuitive burst of enthusiasm, excitement, perplexity or pressure concerning something to teach. It is a behavioral statement, but not typically very specific at this stage. The essential characteristics of this statement are that you are excited about the instructional goal or problem, that you state in a general way what you intend to do to those you teach to help them learn, that you describe generally the target population or whom you intend to teach, and that you describe in a general way what you expect they will be able to do upon completion of your instructional intervention. This is a highly creative and individualistic step. The procedures will help you to identify a topic significant to you.

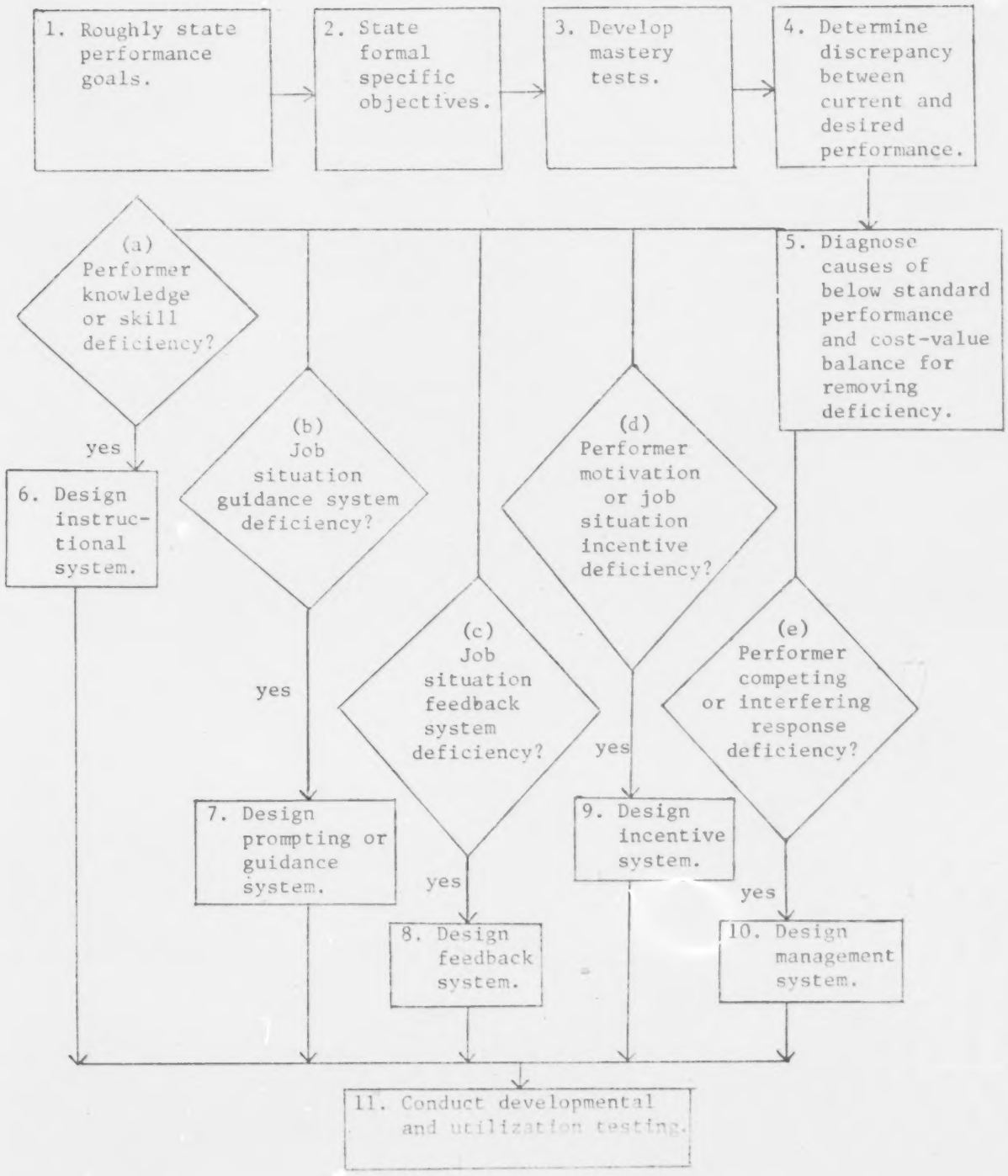
Procedural Guide.--

1. To find a topic or general behavioral goal of instruction try out the following activities:

   a. Write down some topics or skills you have always wanted to teach but never get around to. Select and underline the one which seems most achievable in the time period available and for which you feel you have instructional skills or can easily gain them.

Figure 3-1

A COURSE MODEL: SYSTEM FOR CONSTRUCTION
OF COURSE MATERIALS AND METHODS


1. Roughly state performance goals.
2. State formal specific objectives.
3. Develop mastery tests.
4. Determine discrepancy between current and desired performance.
5. Diagnose causes of below standard performance and cost-value balance for removing deficiency.
(a) Performer knowledge or skill deficiency?
yes
6. Design instructional system.
(b) Job situation guidance system deficiency?
yes
7. Design prompting or guidance system.
(c) Job situation feedback system deficiency?
yes
8. Design feedback system.
(d) Performer motivation or job situation incentive deficiency?
yes
9. Design incentive system.
(e) Performer competing or interfering response deficiency?
yes
10. Design management system.
11. Conduct developmental and utilization testing.

3-2

b. Write down some significant topics or skills you regularly teach and can teach effectively but which are beginning to bore you. Select and underline the one for which you would like to construct a self-instructional sequence so you don't have to teach it again.

c. Write down some topic or skill that you have difficulty teaching but which you must regularly teach.

(Now look over the topics in a, b, and c above and select the one you would like to work on as an exercise in learning how to program instruction.)

2. To identify things you want to do to your target group, try out the following activities:

a. Suppose you are the teacher. Write down whatever comes to you as a training procedure that might be used to instruct someone on the topic or goal of instruction you selected.

b. Suppose you are the student. Write down the things you would most like the teacher to do for you to help you achieve the instructional goal.

3. To identify the target population whom you intend to teach, try out the following activities:

a. Write down the age or situation when the knowledge, skill or attitude you selected to teach is most needed.

b. Write down the skills necessary as a prerequisite to performing the behavioral goal selected.

c. Write down the age of the target group most likely to enjoy or most easily learn the activities required to learn the skill.

4. To identify what you want the target group to be able to do upon completion of your instruction try out the following activity:

Describe in general terms what a person can do who is very good at the "goal behavior" you selected.

If the behavior is very vague and there are not many good examples of the behavior carry out the following exercise: Think of a recent occasion when you observed a student exhibit an unusual amount of some quality of the behavior. Tell when the incident occurred and exactly what the student did or said that indicated

the quality you selected as your instructional goal. If possible, get 10 or more other teachers or observers to report instances of the behavior.

Illustrations of Procedures.--One disadvantage of illustrations is that they often undesirably restrict or limit the kinds and scope of suggestions because students tend to follow the illustration as a model rather than the procedures. The illustrations presented have one purpose, merely to clarify the procedures.

1. Identifying a general behavioral goal of instruction.

   a. Things I've always wanted to teach but never get around to.

      (1) How the thermostat works.

      (2) Political problems in the control of pollution.

      (3) Use of figurative language.

   b. Significant things I regularly teach but am bored with.

      (1) Number bases other than ten.

      (2) Causes of the Civil War in the United States.

      (3) Forming the present participle of a verb.

      (4) Discrimination of the specific variety of colors in natural objects such as trees, leaves, faces, etc.

   c. Things I have difficulty teaching but must regularly teach.

      (1) T-units and other measures of sentence complexity.

      (2) Changing Centigrade to Fahrenheit.

      (3) How the institutions in a community have evolved.

      (4) Getting children to read more books independently.

2. Identifying things I want to do to my target population, (behavioral goal selected: teaching figurative language).

   a. Possible teaching procedures.

      (1) Prepare models of figurative language for students to imitate.

(2) Analyze figurative language in normal speech of target group.

(3) Have a daily five minute paired-off session in using figurative language.

b. How I would like to learn figurative language.

(1) Hear lots of examples.

(2) Have a chance to try it.

3. Identifying the target population.

a. Optimum age for attaining the goal (probably junior high).

b. Prerequisite skills.

(1) Large meaning vocabulary (comprehension).

(2) Vocal or written vocabulary encoding at a high rate.

c. Age activities would likely be most enjoyable.

(1) For girls probably 13 or 14.

(2) For boys probably 16 or 17.

4. What the target group will be able to do.

a. Discriminate different kinds of figurative language.

b. Use figurative language in their own writing.

c. One child said, "He has ketchup eyes," another said, "He has curtain eyes," when looking at a man with bleary eyes and drooping lids.

Step Two: Formal Specific Objectives

General Description.--Recast your roughly stated goals into formal objectives. In this step you match your goals against a comprehensive taxonomy of cognitive skills, attitudes, and other behavior to find out if you left any gaps. Fill in the gaps. Also, make your own statement of goals more specific.

Procedural Guide.--

1. First make an initial list of your course objectives.

2. Submit the list to a subject matter expert (SME) and ask him to suggest additions, deletions, or modifications. Revise your list.

3. Match your list against some taxonomy of educational goals. See references to Krathwohl (1964), Bloom (1956), and Mager (1968) in Step Three.

4. Take your revised list and restate all objectives in a standard form such as that described by Preparing Objectives for Programed Instruction. Palo Alto: Fearon, 1962. Make a final list in the revised form.

5. Below is a list of definitions and examples of well-defined aims or behavioral objectives of instruction.[1] Study each category to see a greater possible scope of aims for a given lesson or course and use it as a guide.

   a. Knowledge

      Knowledge is a category in which the major part of the task is the act of remembering. One can remember terminology, facts, conventions (for example, grammatical form or mathematical notations), trends and sequences, criteria, methodology, principles, or theories.

      Examples of educational objectives:

      Knowledge of criteria: "Recall of a list of criteria for evaluation of anti-pollution control recommendations."

      Knowledge of theories: "Recall of a relatively complete formulation of the theory of evolution."

   b. Comprehension

      Comprehension is a type of understanding in which the individual translates (paraphrases or renders a communication in a different level of abstraction or different symbolic form), interprets (explains or summarizes the major ideas or interrelationships in a communication) or extrapolates (extends trends or tendencies beyond the given data but in accordance with it). Comprehension involves ability to use an abstraction when its use is specified.

      Examples of educational objectives:

      Translation: "The ability to put into words information from maps, tables, or mathematical equations."

[1] From Bloom, (ed.) Taxonomy of Educational Objectives: Handbook I: Cognitive Domain. New York: David McKay Co., 1956.

Interpretation: "The ability to summarize the thought of a work as a whole, the major idea."

c. Application

Application involves the ability to use an abstraction in solving a problem given an appropriate situation in which no mode of solution is specified. Application may call for the student to show only his solution; or his process and solution; or his choice of principles, his process, and his solution.

This category does not apply to educational objectives in the humanities (except as they are studied scientifically). What is called "application" in the humanities may be a part of different processes; for example, creating a piece of artwork would be part of synthesis (see Category e.), and judging an essay for its literary merits would be part of evaluation (see Category f.).

Examples of educational objectives:

Application calling for a solution and principles used in solving this problem: "To determine the effect of burning of plug contacts of an electric iron on the amount of heat produced and to give reasons for the conclusion."

Application calling only for the solution: "To predict the probable effect of a change in a factor on a biological situation previously at equilibrium."

d. Analysis

Analysis is the method of breaking down a communication into its constituent elements or relationships or organizational principles.

Examples of educational objectives:

Analysis of elements: "Ability to distinguish empirical statements from value statements, or to recognize alliteration, metaphor, onomatoepoeia."

Analysis of relationships: "Ability to detect logical fallacies in arguments."

e. Synthesis

Synthesis is the method of assembling elements to form a whole that has a pattern or structure not clearly there before. This unique production may be a communication, a plan or set of operations, or a set of abstract relations.

Examples of educational objectives:

Writing: "To produce a poem using the meter of Browning's 'Soliloquy in a Spanish Cloister' on a contemporary theme similar to Browning's."

Set of operations: "To plan a unit of instruction for a particular teaching situation."

Set of abstract relations: "To derive a new mathematical formula or testable hypothesis to explain available data."

f. Evaluation

Evaluation is the process of judging the value of materials or methods for given purposes on the basis of specified internal or external criteria.

Examples of educational objectives:

Internal criteria: "Judging the accuracy of a speech in terms of logical consistency."

External criteria: "Judging which of several proposed plans for uniform divorce laws best avoids the greatest danger of uniform laws."

6. A list of definitions and examples of well defined behavioral objectives from a different frame of reference is presented here.

Discrimination: Definition and Examples

"Discrimination: is a technical term for "making one kind of response in the presence of one kind of stimulus (R^1 to S^1) and a different kind of response in the presence of other kinds of stimuli (R^2 to S^2, R^3 to S^3).

$S^1 \longrightarrow R^1$

$S^2 \longrightarrow R^2$

$S^3 \longrightarrow R^3$

Examples:

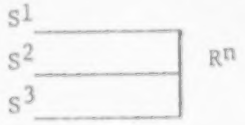
(1) To orally read the different vowel sounds /ae/ as in am and /i/ as in pin for the letters "a" and "i" occurring in words pin and pan.

(2) To give meaning response "together" or "with" for the prefix "con" but not for the prefixes "pro" or "re" or "sub."

(3) To orally read the correct word for each word in sentence reading containing the phrase "in summer" and not to read "substitutions" or "additions" with high probability or high frequency occurrence in oral language such as "in the summer" or "in summertime."

Generalization: Definition and Examples

"Generalization" is a technical term for "making the same kind of response (R^n) to different stimuli (S^1, S^2, S^3).



Examples:

(1) To give the appropriate vowel sounds /ae/ and /i/ when they occur in any three-letter c, v, c words with consonants f, p, m, n, t, th.

(2) To give the meaning response "together" or "with" for the prefix "con" when it appears in assimilated form in words such as correspond, component, collateral.

(3) To orally read correct word for each word in sentence reading for any phrase where an alternate wording occurs with high probability or frequency in oral language.

Chain: Definition and Examples

"Chain" is a technical term for a sequence of responses where each response creates the stimulus for the next response.

Examples:

(1) To be able to write from dictation the words pin and pan (or, using a higher unit of analysis, to be able to write from dictation the sentence "Nip sat in a can.").

(2) Given a word containing a prefix and a root to be able to analyze, give the meanings of the parts and put them together into a meaning for the word.

For example:

Superscript - let's see that is super + script - script is a root meaning 'to write' - super means above or beyond or on top of or better than or greater than - but in the sentence "the letter 'n' in '15n' is a superscript," super must mean above - so a superscript is probably "a smaller character written above another character."

(3) To read in assigned text until appearance of a word for which meaning is not understood, guess at meaning from context clues (e.g., synonym), judge if meaning is still fuzzy and essential to understanding, if so look up in dictionary, complete reading.

Illustrations of Procedure.--A brief sample of responses to Procedural Guide items 1, 2, 3, and 4 above is presented here to clarify the procedures for you.

1. Initial list of course objectives.

   a. Division of fractions (introduction).

2. SME suggested revisions.

   a. Division of a whole number by a proper fraction.

3. Match list against taxonomies (Bloom taxonomy categories as indicated in parentheses after each behavior) to derive a more comprehensive list of behaviors.

   In problems dealing with division of a whole number by a proper fraction, the pupil will be able to:

   a. Produce the correct answer. (Application)

   b. Show work and solution graphically to demonstrate that it is "understood." (Comprehension-Translation)

c. Put into own words the operations and the answer as additional evidence of "understanding." (Comprehension-Translation)

d. Show that the answer is reasonable by a process of estimating. (Comprehension)

e. Demonstrate a proof for the rule "invert the divisor and multiply." (Application)

f. Judge whether a given problem can be solved easier (time for computation) by converting the proper fraction to a decimal or by using it as a common fraction. (Evaluation)

4. Restate all objectives in a standard form using Mager's procedures. The above objectives are already in a standard form. There are two revisions, however, which would put them in a Mager-type form. These are presented below. Given any problem in computational or story form requiring the division of a whole number by a proper fraction, the pupil will be able to:

a. Same as in 3 above.

b. Same as in 3 above.

c. Same as in 3 above.

d. Same as in 3 above.

e. Same as in 3 above.

f. Same as in 3 above.

Performance will be at a level of 95% accuracy or better.

Step Three: Development of Mastery Tests

General Description.--Develop Criterion or Mastery Tests. This step is the actual development of procedures and instruments to assess the behaviors which are your instructional goals.

Procedural Guide.--The major concern in constructing the Criterion Test is developing procedures which elicit behavior which is a sample of the behavior you expect to teach your target group and which can be interpreted unambiguously as evidence of the achievement or nonachievement of the goal. Rather than attempt to describe procedures here for preparing a Criterion Test, we will refer you to other sources.

1. For models of item types appropriate to assessment of various kinds of behaviors see:

   Krathwohl, D. (ed.). Taxonomy of Educational Objectives: Handbook II Affective Domain. New York: David McKay Co., 1964.

   Bloom, B. (ed.). Taxonomy of Educational Objectives: Handbook I Cognitive Domain. New York: David McKay Co., 1956.

   Mager, R. G. Developing Attitude Toward Learning. Palo Alto: Fearon, 1968.

   Bloom, B., Hastings, J. T. and Madaus, G. Handbook on Formative and Summative Evaluation of Student Learning. New York: McGraw-Hill, 1971.

   Webb, E. J., and others. Unobtrusive Measures. Chicago: Rand McNally, 1970.

2. For general suggestions on achievement test construction, see the following:

   Gronlund, Norman E. Constructing Achievement Tests. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1968.

   Making the Classroom Test: A Guide for Teachers, Evaluation and Advisory Service Series No. 4. Princeton, New Jersey: Educational Testing Service, 1961.

   Thorndike, R. L. (ed.). Educational Measurement. Washington, D. C.: American Council on Education, 1971.

Illustrations of Procedures.--Sample test items in a variety of subject areas are presented below to illustrate the variety of behaviors which can be assessed by tests. For more models, see the above references.

1. This item tests discrimination and labeling of metaphor, alliteration, and other poetic devices.

   a. Label the following lines with the appropriate name or names of the poetic device used. Where no special device is used write "NONE."

      (1) Happy as the grass was green.

      (2) Not for the price of your face.

      (3) The wind was pretty strong today.

2. Items (2) and (3) below test comprehension of the process of dividing a whole number by a proper fraction.

   a. Solve the following problem: In making a little nursery chair you have 2 yards of heavy 1 and 1/2" diameter dowel for legs and you need 6 legs. How many legs can you cut from the 2 yards of dowel if you want each leg 3/8 yard long?

      (1) Answer _____.

      (2) Using a yardstick diagram, show graphically that the answer to "(a)" is correct.

      (3) Put into words the process you followed in solving the problem in "(a)".

3. These two items assess recognition and comprehension of the principle that circumstances dictate the nature of conflict and cooperation among and between political parties.

   a. A cartoon shows a boxing ring. In one corner are two elephants being introduced, one marked Conservative Republicans and the other marked Liberal Republicans. In the next frame in another corner of the ring two donkeys are introduced, one marked Conservative Democrats and the other marked Liberal Democrats. The bell rings with the two elephants facing the two donkeys. But in the last frame the two donkeys are fighting each other and the elephants are fighting each other.

      (1) The cartoon illustrates which of the following characteristics of the party system of the United States?

         (a) Strong party discipline is often lacking.

         (b) The parties are responsive to the will of the voters.

         (c) The parties are often more concerned with politics than with the national welfare.

         (d) Bipartisanship often exists in name only.

      (2) The situation shown in the cartoon is <u>least</u> likely to occur at which of the following times?

         (a) During the first session of a new Congress.

(b) During a political party convention.

(c) During a primary election campaign.

(d) During a presidential election campaign.

4. Here is a different model for writing criterion tests or mastery tests. The procedure is as follows:

   a. Decide on the degree of simulation of the actual performance. For example, suppose you wanted to test for the objective "ability to recall, recognize and represent the structure and function of the ameba." There are at least three degrees of simulation possible.

	Stimulus	Response	Consequence
(1)	Student looks into microscope at ameba.	Draw ameba and label structures and functions.	Completed drawings.
(2)	Statement requesting that student "represent both structure and function of an ameba in labeled drawings."	Draw ameba and label structure and functions.	Completed drawings.
(3)	Directions to "list and define the major characteristics of structure and function of the ameba."	Write the structural and functional characteristics with definitions.	Written terms and definitions.

   b. Decide for each of the degrees of simulation whether it is: necessary behavior (the student must be able to perform it), whether performance of one behavior transfers to the others, and whether the stimuli, responses and consequences are efficient (easy or hard or cheap or expensive) to use. For example:

(See chart on following page)

ANALYSIS OF CRITERION TEST MODELS TO DETERMINE MOST APPROPRIATE ONE

Stimulus	Response	Consequence	Necessity	Transfer	Efficiency
(1) Student looks into microscope at ameba	Draw ameba and label structures and functions	Completed drawings	Yes	Yes, to 2 and 3	Expensive and difficult to arrange
(2)* Statement requesting that student "represent both structure and function of an ameba in labeled drawings."	Draw ameba and label structure and functions	Completed drawings	Yes	Yes, to 1 and 3	Easy to arrange and cheap
(3) Directions to "List and define the major characteristics of structure and function of the ameba."	Write the structural and functional characteristics with definitions	Written terms and definitions	No	Partially to 1 and 2	Easy to arrange and cheap

c. From the chart on page 3-15, select the simulation model which is the best one and put an asterisk (*) by it. In this case Model "2" is best because it is efficient, measures a necessary behavior and transfers to the other necessary skill.

d. Construct a criterion test or mastery task for the behavior using the model you selected.

Following is a sample set of objectives and criterion test for a program on metaphor.

Sample Objectives and Criterion Test for a Program on Metaphor

Objectives.--The major objective will be the development of skill in the use of metaphor in writing. The specific behaviors assumed to be relevant to this objective are presented below.

1. Given give minutes for free writing, to produce a rate of different words and total words to reach the criterion of 30 words per minute and 80% of words not redundant. (Note: On a tryout of the criterion test the average word production was 6 per minute and 90% of words were non-redundant.)

2. Recognize words or phrases from one's own writing (as in #1) with high association value or meaning to oneself. To be able to pick out three high association phrases.

3. Transformation of one's own words and phrases into metaphor with a context that makes the metaphor happen. To make formally or technically correct metaphors (100/100) and have a judged rank on an absolute scale of 6 or better (100/75).

4. To write a metaphor which is a transformation of one's own words or phrases (100/100). (Student's criterion test will be used for selection of his own words or phrases.)

5. To write a metaphor given a cliche in the form of a simile and complete the metaphor by adding context (100/100).

6. To complete a metaphor by adding context which makes it happen (100/100).

7. To identify metaphors where the context makes the implicit comparison "happen" emotionally or in terms of imagery (100/100).

8. To identify metaphors when presented alone or with similies, hyperbole, and alliteration (100/100).

Criterion Test.--Items in criterion test are numbered to correspond with objectives. Items must be administered in the order listed with no opportunity to look ahead.

1. Write down anything that comes to mind without concerning yourself with grammar, spelling or content. You may change subjects as you go along. Just write and let one thing suggest another to you. Write as much as you can. You will have 5 minutes. I will tell you when time is up.

2. Go back over the material you wrote above. Underline expressions which you like very much and have a lot of meaning for you. Circle ideas which may not be particularly well stated but which mean a lot to you.

3. Write down three of the phrases or ideas which you underlined or circled and label them 1, 2 and 3 leaving a space under each. In the space write a transformation of your idea or phrase into a metaphor. Add the context that "makes the metaphor happen." That is, add two or three lines which make the idea of the metaphor get across to the reader emotionally or in terms of imagery.

4. Item three assesses the behavior specified in objectives three and four.

5. Rewrite the following cliches in the form of a metaphor and add a context of 2 or 3 lines to make the metaphor happen for the reader.

   - He is like an open book.
   - He is as bright as the sun.
   - She is happy as a lark.
   - She was as cool as a cucumber.
   - He was as tired as sin.

6. Complete the following metaphors by adding lines of context (2 or 3) which make the idea of the metaphor happen vividly so the reader can experience it.

   - A bed is a boat.
   - Salesmen are shining suns.
   - Mothers are oysters.
   - Ice cream is female.
   - Our doubts are enemies.

7. In each of the following pairs of verses, choose the one in which the second and third lines make the metaphor happen or seem more real.

a. (1) beds are boats
floating on moats
and never getting anywhere

(2) beds are boats
circling moats
charming castles

b. (1) Salesmen are shining suns
who smiling
blind and burn you

(2) salesmen are shining suns
of b(usinessmen)
who make the market move

c. (1) mothers are oysters
or mothers are clams
and boys are the diggers of dams

(2) mothers are oysters
who cling to old barges
believing that story about pearls

8. In each of the following check the alternative which is a metaphor. If none of the alternatives are metaphors, do not check any. If more than one is a metaphor, check both.

a. (1) her hand was ice
(2) her hand was cold

b. (1) O my love is like a melody
(2) clouds are the white birds of heaven

c. (1) the stars were diamonds
(2) her smiles are roses in the snow

d. (1) children are gay songs
(2) tobacco is like love

e. (1) she went for a thousand days
(2) he shook like an earthquake

f. (1) bright as the sun, her eyes the gazers strike
(2) the leaves crackle and cringe in the waning winds

Steps Four and Five: Determine Extent of Performance Deficiency

Determine discrepancy between current and desired performance (Step four) and roughly characterize the type of performance deficiency (Step five).

General description.--This step requires assessment of performance in the target group (i.e., the people you want to perform better), determination of the extent of specific performance deficiencies, and determination of the kind (or cause) of the performance deficiency. There are five kinds of performance deficiency which may generally be labeled as follows:

1. Performer knowledge or skill deficiency.
2. Job situation guidance system deficiency.
3. Job situation feedback system deficiency.
4. Performer motivation deficiency and/or job situation incentive deficiency.
5. Performer competing or interfering responses on job situation interferences.

Procedural Guide.--There is no simple technology for conducting this step. Some excellent resources are:

Harless, Joe H. An Ounce of Analysis, Box 1144, Falls Church, Virginia: Harless Educational Technologists, Inc., 1970.

Mager, R. F. Analyzing Performance Deficiencies, Palo Alto: Fearon, 1970.

Procedures to be used are outlined below:

1. Administer the mastery test or other assessment procedures to a selection of persons from your target population that are representative of the major relevant subgroups (ability, age, achievement, ethnic group, whatever). Observe and record significant behaviors during assessment. Identify who can do what, when and under what conditions.
2. Determine the most likely cause of the observed performance deficiencies. Clues as to the characteristics of each type of performance deficiency are listed here:

a. Performer knowledge or skill deficiency: He couldn't do it if his life depended on it. He doesn't know how or when to do the job. Or, he can't do it at a high enough level of proficiency. Or, he can't do it without additional cues or prompts. But the additional cues needed to perform cannot be a part of the on-the-job performance situation. There never has been any training or adequate training, the person(s) never performed the task correctly before, he cannot perform the task well now even when directly asked to and observed under conditions where it makes a difference if he fails.

b. Job situation guidance system deficiency: He couldn't do the job as it is defined in the current system if his life depended on it. However, he could do it with a few hints or prompts or cues; that is he could do it with a little on-the-job reminding or prompting system. Also, there is no reason why such a system could not be installed. With a slight prompt or checklist of some sort he can perform correctly and these prompts may easily be a part of the job situation; that is, they need not be learned. Or he can't currently perform with a prompt but could with minor training and the prompt may be an appropriate part of the job situation.

c. Job situation feedback system deficiency: He can do the job. He is motivated to do it; that is, if it is not done or not done well he is displeased and his effort goes up. The problem is, the performer does not know when he is doing poorly and when he is doing well. He cannot or does not make that discrimination on his own and there is nothing in the system that lets him know. An analysis of the job situation indicates that the performer has done the job well or under direct observation performs well and thus does not have a knowledge or skill deficiency. However, there is evidence that the performer is not told when he is doing well and poorly and that such a discrimination is not made by the performer.

d. Performer motivation deficiency and/or job situation incentive deficiency: The performer can do the job well, can discriminate when it is done well, but does not perform well because of deficiencies in his own motivation for the job and/or deficiencies in on-the-job consequences for performance. There is evidence that appropriate behavior is being punished, that the performer sees no positive consequences for doing it well, sees alternative methods (responses) that are more appealing or appropriate to him, and could do the task if he "wanted" to or was required to.

e. Performer competing or interfering responses or job situation interferences: The performer can do the job, he is motivated to do it and the job incentives are satisfactory (i.e., increasing either or both would not improve performance), he knows when the job is done well and when it is done poorly. The problem is that he has old habits which interfere. Two jobs must be done simultaneously, performers have "too many jobs" or feel they have, there are no priority rules when more than one task is to be accomplished in a period of time when it is impossible under current systems, there is time with no performance task to be accomplished, there are competing responses, well-learned, in the performer's repertoire which are elicited under the usual performance conditions.

Illustrations of Procedures.--

1. Assessment of performance in the target group and determination of the extent of specific performance deficiencies. A criterion test was administered to one eighth grade boy and three sixth graders. The test called for: definitions and examples of metaphor, alliteration, onomatopoeia, assonance, and hyperbole; comprehension of a metaphor; discrimination and labeling of alliteration, simile, metaphor, onomatopoeia, hyperbole, and assonance; use of the above poetic devices in stylistic transformation of a trite phrase into a poetic form; number of ideas or phrases generated in five minutes and writing a 30 line poem. There were no correct definitions and examples, 3 out of the 4 students showed comprehension of a metaphor, discrimination and labeling of poetic devices was generally low (a total score for the group of 6 out of 40), but use of the devices in transformation of trite phrases or constructing a poem was higher (4 out of 12 for each of two of the subjects).

2. Analysis of the causes of specific performance deficiencies. Some causes may be immediately discounted. Thus poor motivation is not likely a cause since testing was conducted under conditions of high motivation (the boys were paid) and the boys worked at a high steady rate on the task. Also, there was no evidence of competing responses interfering with performance. Thus, there were typically no incorrect alternative responses. When the subject didn't know an answer it was usually blank and questioning did not elicit previously learned high probability incompatible responses. Thus, the problem is probably primarily a training and maintenance problem falling under the categories of knowledge and skill deficiency, guidance system deficiency and feedback system deficiencies. The evidence for this is that some responses are simply not in the students' repertoire (e.g., giving definitions and examples of metaphor, alliteration, etc.) and some are

there but not under the control of stimuli used in the test (e.g., some students use poetic devices such as assonance, metaphor and alliteration, but cannot label them such nor produce them on command under the stimulus of the name of the device.

Step Six: Construct an Instructional System

Revise objectives and Criterion Test and form a tentative sequence of instruction.--This step involves a revision of objectives and criterion test based on the analysis and interpretation of data in Step five. Then there is a tentative sequencing of objectives based on an analysis of the final criterion behavior. This analysis may be highly formal or largely heuristic and informal.

Procedural Guide.--It is extremely important that this step be taken carefully and objectively. If necessary, let a few days lapse after the data analysis of Step five so that you can look at the problem more objectively. The following steps are recommended:

1. In the light of the interpretation of test results arrived at in Step five determine what criterion test items and objectives are irrelevant to the task and delete them. Determine which are relevant and currently omitted and add them.

2. In view of the responses to criterion test items, identify those items where the performance deficiency seems to be a function of item characteristics. Such characteristics might include: an ambiguous item, an item without a sufficient prompt for the expected response, and items which are too easy (passed by 85% or more of a target group).

3. Conduct an analysis of your criterion behavior and a tentative sequencing using either formal or informal behaviors.

   a. Carry out a formal analysis of the criterion behavior and a tentative sequence using the units of chains, discriminations, and generalizations discussed by Mechner, R., in Chapter 4 of Lange, Phil C. (ed.). Programmed Instruction: The Sixty-Sixth Yearbook of the National Society for the Study of Education Part II. Chicago: University of Chicago Press, 1969, or use Gagne', Robert, Conditions of Learning. New York: Holt, Rinehart and Winston, 1965, Chap. 7.

   b. Carry out an informal analysis of the criterion behavior in place of or in addition to the formal analysis. One simple procedure for this kind of analysis is as follows:

(1) Locate a person who does not have the performance competencies you are trying to teach but who has the prerequisites for learning them and is fairly articulate.

(2) Set up a tape recorder to get an accurate record of the activity which follows.

(3) The procedure involves a Socratic dialogue between the expert (you) and the learner (the person selected to meet criteria described in 3b(1) above).

(a) Expert (E) tells learner (L) to listen and watch so as to learn to perform the specified criterion behavior.

(b) E tells L to stop him and tell him whenever he doesn't understand or cannot do a thing. Also, L should stop E when he understands but has reached a saturation point or information overloading and wants a chance to repeat the performance up to the point of stopping.

(c) E then teaches L, stops when L stops him and clarifies, repeats, expands, etc., as needed.

(d) E also stops when he himself wants a check on whether L is processing the information or can reproduce it, and calls for a response from L.

(e) The transcript of the recording is analyzed for clues as to the major chunks of behavior that might constitute sub-units of instruction. These sub-units may then be sequenced as seems effective from the rough tryout.

4. Write criterion frames (sub-tests to be used within the program) for each sub-unit and order them in the proposed sequence of instruction.

Illustrations of Procedures.--To provide detailed illustrations with enough variety to be useful would be too cumbersome. Feedback on your own attempts to use the models described by Gagne' and Mechner and the procedures above will serve to correct misunderstandings. However, the examples in Step two describing discrimination, generalization and chaining illustrate the kinds of material that might show up in this step.

Collect rules and examples that might be useful for preparing instruction and material to achieve criterion behavior.--Up to this point you have prepared the skeleton structure for your instructional material. In a final instructional package you will need many illustrations of procedures. This step is designed to get you to collect the material.

The process of collecting rules and examples is quite simple though in some cases time consuming. A RULE is a statement of any generality for which there are two or more specific instances or examples. An EXAMPLE is a specific instance or illustration of a rule. The rule may be a statement of how to do something (to square a number, multiply it by itself) or a relationship between events (racially prejudiced behavior is maintained by its consequences). An example is simply an instance of the rule. Thus, "the square of 4 is 4 x 4 or 16" is an example of the rule on "how to square a number." Also, the statement "Rejecting a Negro for a teaching position in a totally white school reduced the threat of aversive social relationships and thus maintains prejudiced behavior," is an example of the rule on "how prejudiced behavior is maintained."

Procedural Guide.--The following steps are recommended.

1. For each criterion frame you have constructed, make a list of all the rules (concepts, principles, procedures, or other statements of some generality) that are necessary explanatory steps, prompts or other precursors to achievement of the objective.

2. For each rule derived from the above analysis collect three or more examples for use for instruction.

Illustrations of Procedures.--

1. For the criterion frame "the square of 45 is _____." There are a number of rules which are precursive to performing that operation. The following are illustrative:

   a. To square a number multiply it by itself.

   b. The square of a number ending in 5 always ends with the digit 25.

   c. The portion of the square of a number ending in 5 which precedes the last two digits is obtained by multiplying that portion of the original number preceding the final "5" by one more than itself.

2. Some examples for the rules above are:

   a. To square a number...

(1) 5 squared is 5 x 5.

(2) 7 squared is 7 x 7.

b. The square of a number ending in 5...

(1) 15 squared is 225.

(2) 25 squared is 625.

c. The portion of the square of a number ending in 5 which precedes last 2 digits...

(1) For 45 the last two digits are 25 and the part preceding it is 4 x 5 or 20 squared.

(2) For 75 squared the last two digits are 25 and the part preceding it is 7 x 8 or 56.

Tutor informally three persons (one at a time) from the target population using the criterion frames and the RULES and EXAMPLES collected.--The essential principle of course construction is that it is based on what works. There is no substitute for a tryout of the material. It has been found that tryouts with one or two persons can produce useful information for course construction and revision. Thus, in the developmental stages of course development tryouts on one person at a time are recommended. This tutoring step, which is the second actual tryout (you did some tutoring in Step five) is the final step before actually writing "frames" or "sub-units" of instruction.

Procedural Guide.--Select three persons from your target population who have the prerequisite behaviors for your instruction but cannot perform the criterion behavior. Individually tutor the students and note things such as:

1. Changes in sequence of instruction which appear more appropriate.

2. Improvements in statements of rules for greater accuracy or clarity.

3. Additions of rules and consequent remedial branching of instruction for some persons.

4. Possible deletions of rules and consequent skipping of instruction on some rules by some persons.

5. Necessary changes in examples or additions to get greater generalization of application of rules.

6. Modifications of presentation procedures to obtain necessary discrimination learning.

Illustrations of Procedures.--Some of the kinds of information obtained from tutoring at this stage are as follows:

1. A program in squaring two digit numbers ending in 5 was found to be more effective when the learner was allowed to go back over previous material as needed.

2. It is confusing to use the number 45 to introduce the rule concerning multiplying the digit(s) preceding the ending 5 by more than itself.

3. The instructional sequence in "squaring two digit number..." did not teach the behavior of "state the rules." It only taught the actual computational skill.

4. In a program for teaching discrimination and production of metaphor, there was a lack of discrimination between simile and metaphor. Since simile is so common it is an interfering response. Thus, it would probably be best to immediately present them together to teach the discrimination.

5. Intermediate rules are necessary for teaching the sequence or chain of behaviors involved in "producing the context for a metaphor." The rules suggested are...

Write 20 "frames" or instructional segments.--The actual writing of instructional material has awaited a good deal of formal and informal analysis and teaching. The process of writing is still more of an art than a technology. However, some standard instructional guidelines have been developed. Two sources that may prove valuable are presented below. Markle's book is highly technical and detailed. Brethower's is briefer and simpler.

Markle, Susan M. Good Frames and Bad. New York: Wiley, 1969.

Brethower, Dale M., et. al. Programmed Learning: A Practicum. Ann Arbor, Michigan: Ann Arbor Publishers, 1965.

Procedural Guide.--It is not reasonable to attempt to reproduce here the details of the above sources. Thus, the would-be course writer is directed to the above sources and encouraged to write instructional material to produce competency in performance on each criterion frame of his instructional program. It is recommended however that the course-writer try producing a variety of types of frames as suggested in the illustrations and exercises below.

Illustrations of Procedures.--On the following pages are summaries of some basic techniques for writing some of the elements of course units.

The RULEG System

This is a system for constructing frames in which a rule is given (the rule is a statement or general principle or procedure of some generality) a complete example is given (an instance of the rule) and an incomplete example (one where the student completes an example.) From there on the procedure involves slowly fading away the rule and complete example so that the student is completing an example without the prompts of the rule and completed example.

Here is a frame with rule, completed example and incomplete example.

> When a word ends in a single vowel followed by a single consonant, you double the final consonant when you add a suffix beginning with a vowel.
>
> For instance: BAT + ING = BATTING.
>
> Now you do one: SIT + ING = _____.

If you wanted to teach discrimination so that "doubling the final consonant and adding the ending" is not used in the wrong situations, you would use the words TREAT and FIT rather than TROT and FIT.

The EGRUL System

This is a system for constructing frames in which two or more examples are given before the student completes the rule.

Here is a frame using the EGRUL system.

1. The word ILLUMINATE has the definition "put light into." The root is lumin. What form does the prefix meaning "into" have?_____.

   Answer. il.

2. The kind of informal speech that people use when they are "talking together" is called COLLOQUIAL speech. The root loqu means "talk." What form does the prefix meaning "together" have? _____.

   Answer. col.

3. Acts that are not lawful are ILLEGAL. What form does the negative prefix have?_____.

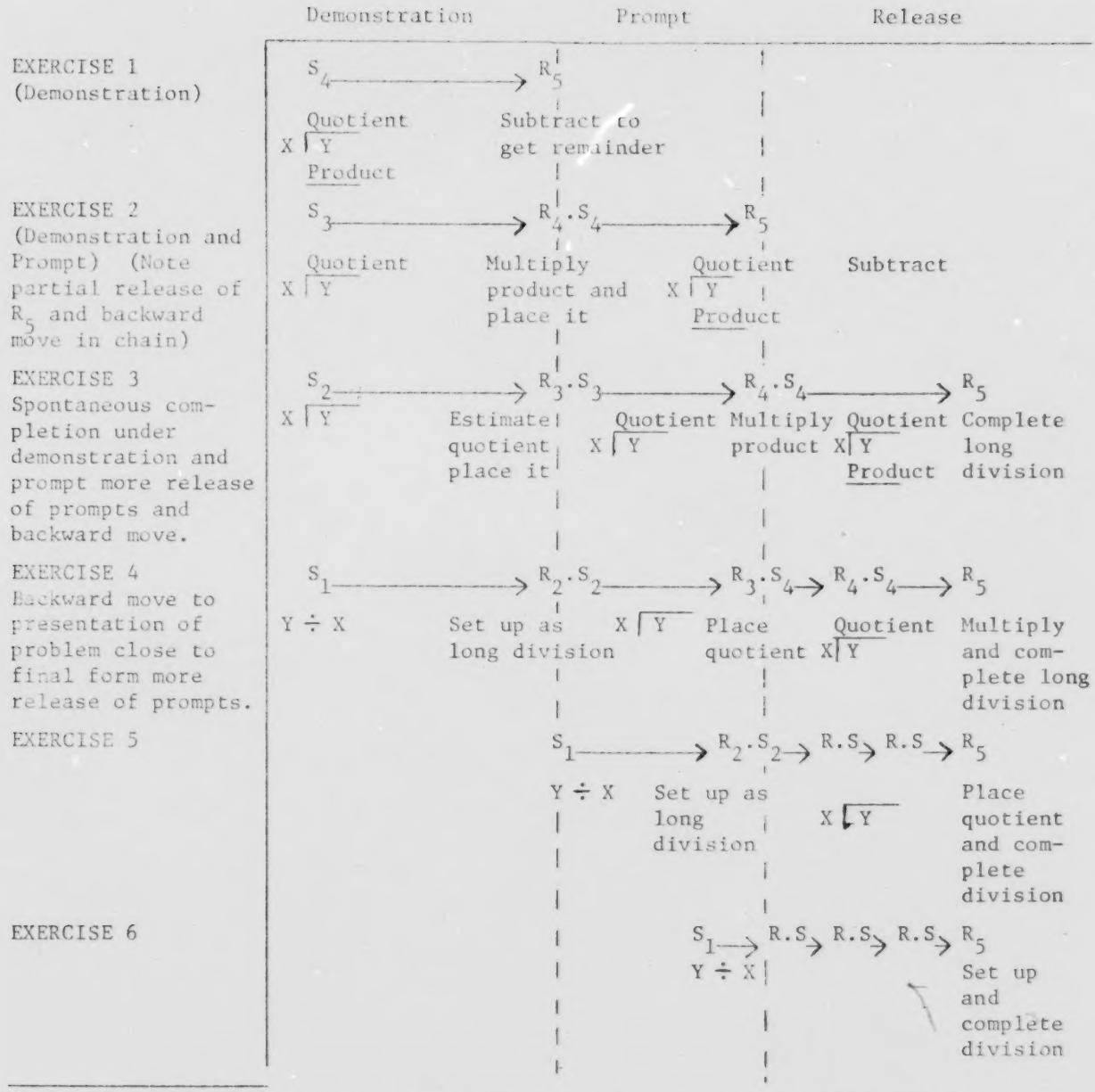
   Answer. il.

4. The words ILLUMINATE, COLLOQUIAL, and ILLEGAL suggest that there is another spelling rule common to prefixes ending in n. It seems that they take a form ending in _____ when the root begins with _____.

   Answer. l, l.

It would probably be better to have the student adopt the expert programmer's carefully-chosen statement of a RU rather than make up most of the rule himself in an awkward induction-derived statement.

A Behavior Chain *

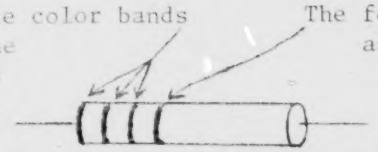

Demonstration
Prompt
Release
EXERCISE 1 (Demonstration)
EXERCISE 2 (Demonstration and Prompt) (Note partial release of R5 and backward move in chain)
EXERCISE 3 Spontaneous completion under demonstration and prompt more release of prompts and backward move.
EXERCISE 4 Backward move to presentation of problem close to final form more release of prompts.
EXERCISE 5
EXERCISE 6
Quotient
Product
Subtract to get remainder
Multiply product and place it
Estimate quotient place it
Multiply product
Subtract
Complete long division
Set up as long division
Place quotient
Multiply and complete long division
Place quotient and complete division
Set up and complete division

*Adapted from Thomas F. Gilbert "Mathetics" in Review of Educational Cybernetics and Applied Linguistics. London: Longmac Ltd. March, 1969, p. 37.

Multiple Discriminations *

1. Some electrical resistors have COLOR BANDS that tell how much they will resist electric current. On small resistors you can see colors better than numbers. Each color stands for a number.

The first three color bands are read as the number of Ohms resistance.



The fourth color band is read as the per cent of error in the rating.

---

2. Each of the FIRST THREE COLOR BANDS can have one of ten colors. Read through the list twice. Learn the NUMBER for which each COLOR stands.

A FIVE dollar bill is GREEN
ONE BROWN penny
A WHITE cat has NINE lives
SEVEN PURPLE seas
A BLUE tail fly has SIX legs
ZERO: BLACK nothingness
A RED heart has TWO parts
THREE ORANGES
A FOUR legged YELLOW dog
An EIGHTY year old man has GRAY hair

---

3. List the number for which each color stands.

RED_____ (heart)	WHITE_____ (cat)	PURPLE_____ (seas)
BROWN_____ (penny)	BLACK_____ (nothingness)	GREEN_____ (bill)
GRAY_____ (hair)	BLUE_____ (tail fly)	ORANGE_____ (oranges)
YELLOW_____ (dog)		

---

4. List the NUMBER for which each color stands.

BLACK_____ BROWN_____ YELLOW_____ GRAY_____ GREEN_____

WHITE_____ PURPLE_____ BLUE_____ RED_____ ORANGE_____

---

*From Thomas F. Gilbert "Mathetics" in Review of Educational Cybernetics and Applied Linguistics. London: Longmac Ltd. March, 1969, p. 41.

Prompts

A prompt is a supplementary stimulus that is added to a terminal stimulus to make the item easier or to make the response more probable. But what is added isn't enough to produce the response all by itself. It depends on some previous learning.

Prompted frame: When adding - ing to most verbs ending in -e, drop the e. For instance, when we add - ing to ROPE we get ROPING.

Now add ing to BRAKE: _____.

Terminal frame: Write the appropriate forms of the following verbs when they occur with -ing endings. TAKE, SLIDE, MAKE, SINGE.

Copying frame: When adding - ing to most verbs ending in -e, drop the e. For instance, when we add -ing to ROPE, we get ROPING. The letter _____ was dropped off the word ROPE to make ROPING.

There are two kinds of prompts: formal and thematic. The formal prompt gives the student part of the response desired such as the number of letters in a word, the first letter in the word or the configuration of the word. A thematic prompt cues the appropriate response because of its theme, meaning, or associations. Variety in types of prompts makes for a more interesting program. Rules and examples as discussed in the RULEG System are thematic prompts because they specify the subject under discussion in a general way.

Thematic Prompts

1. (Picture of fan) I am a

fan
|
pan

2. Synonyms and antonyms. A person migrating <u>into</u> a country is called an immigrant and a person migrating <u>out</u> of a country is called an ____migrant.

   Answer. Emigrant

3. Rules. In assimilation of prefixes, the final consonant of a prefix becomes either (1) the same letter as the first consonant of the root or (2) a letter which prepares for the enunciation of the root or makes it easier to pronounce. For the prefix and root "in + legal" which of the rules for assimilation applies? (1) or (2)?

   Answer. (1)

4. Examples:

   "To deposit is to put down. To detract is to pull _____."

   Answer. Down

5. Analogy.

   "Just as a dollar has 100 cents, a meter has _____ centimeters."

   Answer. 100

Formal Prompts

(Some copying frames are included here even though some authors do not consider these as prompts.)

1. Number of letters.

   "Meaningful units that go after the root are called _____ _____ _____ fixes."

2. Read the panel.

   "The panel says that a meaningful unit called a suffix is put after a _____."

3. Parallel structure.

   "If we add the meaning of the prefix UN_____ to the meaning of the root ABLE, we get the _____ of the word UNABLE."

4. Rhyming.

   "I am a fan in a p___n."

5. Structure or diagrams or emphasis.

   If ex means "out," an expositor is a person who puts _____ an idea.

FIRST DRAFT OF PROGRAM ON METAPHOR

1. Sometimes you want to say something old in a new way so it will have a more powerful effect.

   One way of saying things in a different but powerful way is to compare them with something else. "I am like a rock" and "I am a rock" are possible ways of saying I am strong by comparing myself with a rock.

NO ANSWER REQUIRED

2. Simile (SIM-a-lee) and Metaphor (MET-a-four) are two ways of comparing things with something else. Learn them.

   Simile - compares or describes things alike in some ways but unlike in others by using the words <u>like</u> or <u>as</u>.

   I am like a rock.
   She is like a ribbon.
   Spring is like a hand.
   The record is as sweet as a bird.
   I was as lonely as a cloud.

   Metaphor - compares or describes things alike in some ways but unlike in others <u>without</u> using the words <u>like</u> or <u>as</u>.

   I am a rock.
   She is a ribbon.
   Spring is a hand.
   The record is a sweet bird.
   I was a lonely cloud.

NO WRITTEN ANSWER REQUIRED

3. Which is metaphor and which is simile?

   (a) A bed is <u>like</u> a boat. _____
   (b) A bed is a boat. _____
   (c) A bed is <u>as</u> dreamy <u>as</u> a boat. _____

(a) simile (b) metaphor (c) simile

4. What is the name of a comparison between things which are alike in some ways but unlike in others, if:

   (a) The word <u>like</u> or <u>as</u> is used. _____
   (b) The word like or as is <u>not</u> used. _____

(a) simile (b) metaphor

5. Which is metaphor, which simile, and which neither.

(a) My hand is a block of ice. _____
(b) My hand is cold. _____
(c) My hand is like a block of ice. _____
(d) My hand is as a block of ice. _____

IF YOU CAN ANSWER THIS CORRECTLY, SKIP THE NEXT THREE EXERCISES.

(a) metaphor (b) neither (c) simile (d) simile

6. Some statements do compare things.

Her hand was like ice.
Her hand was a block of ice.

Other statements do not compare things.

Her hand was moving.
Her hand was shaking.
Her hand was cold.

Mark "C" beside each of the following statements which compares one thing with another, and "X" beside the statements which do not make a comparison.

(a) She wept for a thousand days. _____
(b) She wept like a storm. _____
(c) She was a storm. _____
(d) She was as wild as a storm. _____
(e) She was very sad. _____

(a) X (b) C (c) C (d) C (e) X

7. A simile compares things using the words like or as.
A metaphor compares things without using like or as.
Some statements do not compare things.

Mark each of the following as simile, metaphor, or neither.

(a) Mothers are oysters. _____
(b) Mothers are tight lipped. _____
(c) Mothers are like oysters. _____

(a) metaphor (b) neither (c) simile

8. Mark the following as simile, metaphor, or neither.

(a) *Salesmen are moons.* _____
(b) Ships are like dreams. _____
(c) The leaves crackle. _____

(a) metaphor (b) simile (c) neither

9. A metaphor or a simile is most effective when the lines which follow it (the context) make the intended comparison "happen" or come alive.

Spring is like a perhaps hand
(which comes carefully out of Nowhere) arranging
a window, into which people look (while
people stare
arranging and changing placing
carefully there a strange
thing and a known thing here) and
changing everything carefully.

In the above comparison of Spring to a hand in a window, the context (the lines which follow) makes the comparison more vivid than the first line alone.

(a) Is the comparison a simile or a metaphor? _____
(b) Does the context make the comparison "happen" or "come alive"? _____

(a) simile (b) yes it does

10. Here are two verses. Read them and then answer the questions below.

(1) Karen is a city
full of bustle
making everybody hustle
not feeding the animals
foggy in the head.

(2) A bird is like a book
I heard one sing in the forest today
a failing note
he was perched in that great tree
whose sap was ebbing away.

(a) Is the first line of verse (1) a simile, a metaphor, or neither? _____
(b) Is the first line of verse (2) a simile, a metaphor, or neither? _____

(c) In which verse, (1) or (2), does the context make the first line comparison come alive? _____

(a) metaphor (b) simile (c) verse (1)

11. ME: tough, strong legs, hard to break or lose my temper unless you rub me the wrong way, colorful clothes, make beautiful paintings.

TOUGH - like a rock: hard, durable, brittle, colorful gems, beautiful polished.

I AM A ROCK

I am a rock
Sometimes rough and hard
Until someone strikes
with the wrong angle
and _____

(a) Finish the above verse to make the metaphor of the first line have a more striking effect by the context you add.

THERE IS NO ONE CORRECT ANSWER. IF YOU USED THE METAPHOR, YOU ARE RIGHT

12. FEMALE: face, lips, cute, sweet, girl friend, I don't have any.

SWEET like ICE CREAM

ICE CREAM is FEMALE

Ice cream is female
It is usually sweet
_____
_____
_____

(a) Finish the above verse by adding two or three lines of context to make the metaphor more livid.

THERE IS NO ONE CORRECT ANSWER. A COMPLETION BY ANOTHER STUDENT WENT LIKE THIS:

It comes in many colors
But goes quickly with the heat
And there is none on my street.

13. BED: dream, travel, nightmares, lost, awake, safe.

TRAVEL - like boats which travel to dreamy places, encounter danger, get lost but usually arrive after the nightmare adventure, safe at the destination.

(a) My bed is _____
(finish the comparison as a simile or a metaphor)

(b) My bed is _____
_____
_____
(write 3 more lines of context to make the implied comparison happen for the reader)

AGAIN THERE IS NO ONE CORRECT ANSWER. ONE STUDENT WROTE THE FOLLOWING:

My bed is like a boat
Barging in to rockbound shores
And losing sight of home
Till mists give way to surer loam.

---

14. SALESMEN: Always smiling, if you look at them they can get you to believe anything, they are usually warm people, they make the economy grow, they can get you to spend more than you should.

SMILING: SUN

(a) Write down all the things about sun you can think of that are related to the things about salesmen written above or other things about salesmen you can think of.

_____
_____
_____

(b) Make a comparison between salesmen and sun as a metaphor or a simile.

_____

(c) Write three or more additional lines of context to make the metaphor or simile happen or become more vivid.

_____
_____
_____

THERE IS NO ONE CORRECT ANSWER

---

15. WATER FAUCET: drips, sputters, cool, wet, clean, splashes, turned off, doesn't operate.

DOESN'T OPERATE:

(a) Write down something that "doesn't operate" suggests that has something in common with a water faucet.

_____

(b) Now write down all the things about it that are related in some way to the things written about the faucet or to other things about a faucet.

_____
_____
_____

(c) Make a comparison statement between WATER FAUCET and the other thing expressed as a simile or metaphor.

_____

(d) Write a verse of four or more lines so that the context makes the comparison happen or become more vivid.

_____
_____
_____
_____

THERE IS NO ONE CORRECT ANSWER, BUT ONE STUDENT WROTE THE FOLLOWING:

(a) SICK MAN
(b) coughs, sputters, is cold, near death, can't operate too well at work, diseased or dirty
(c) the faucet is a sick man
(d) the faucet is a sick man
the poor ailing
coughing
sputtering thing

---

16. (a) SAM (or name any man you wish): _____

_____

(b) Think of any man and write down all the things that he brings to mind. Write down at least 8 things.

_____

_____

_____

_____

_____

_____

_____

_____

(c) Now pick out one outstanding thing you wrote down and think of any object or thing that has a similar characteristic (e.g., if you wrote 'helps people better themselves' you might say that a 'bridge' has a similar quality in that it helps you get where you want to.

_____

(d) Write down all the qualities of the thing you mentioned in (c) that are in some way related to qualities of the man you described in (b).

_____

_____

_____

(e) Write a comparison between the two things (a and c) in the form of a simile or metaphor.

_____

(f) Now write a verse of four or more lines to make the simile or metaphor more vivid.

_____

_____

_____

_____

NO ONE CORRECT ANSWER

17. (a) Name any subject or thing. _____

(b) Write down all the things you think of when you think of this subject.

_____
_____
_____

(c) Now name some thing that has one or more of the qualities of your subject in (a) but is otherwise quite different.

_____

(d) Write down all the things that the second subject means to you that are in some way related to the first subject.

_____
_____
_____

(e) Write down a comparison between the two subjects in the form of a simile or metaphor and write three or more additional lines of context to make the comparison come alive or happen for the reader.

_____
_____
_____
_____

NO ONE CORRECT ANSWER

Step Seven: Design Prompting or Guidance Systems

Determine the elements of your performance which can be handled by a guidance system and develop the system.

Label and General Description.--Guidance or prompting system. If you have identified a knowledge or skill deficiency it may not be necessary to train the students. The alternative to training is "prompting" or "guidance." Study the sheets which follow for Step five and then select the appropriate guidance tool for that part of your skill or knowledge deficiency that it seems to fit and develop the guidance system for it.

Procedural Guides.--The procedures for using a prompting or guidance system include the following:

1. Determine its appropriateness by asking if the following conditions are present. If one or more of these conditions are present consider using a prompting or guidance system.

   - the task does not have to be memorized or performed without prompts.

   - it is performed infrequently or at a low rate and is thus uneconomical to train for the performance.

   - it requires a high level of accuracy not obtainable with training such as medical lab or airline pilot task check out systems.

   - the task is extremely complex and difficult to learn.

   - performance can often be obtained by persons with less training, experience and salary.

   - the people who will use the guidance system will not feel their intelligence is insulted or if they do they can be "talked out of it" with some instruction on the theory behind use of the system.

   - you need to reach a lot of potential performers who could not come into the necessary training location or could not come in without excessive cost.

   - the performance can be learned incidentally by following a guidance system regularly.

   - a guidance or prompting system would not interfere with performance on the job. Thus, the use of multiplication tables would seriously impair performance of a statistical clerk.

2. There are a variety of kinds of guidance systems. Study the examples under each below to find the one(s) most appropriate to your own situation.

Type of Guidance System	Sample Situations
a. Cue cards (a list of general prompts reminding the person of a complex routine he already has mastery of).	1. An interviewer wishes to remind himself to begin with a "nondirective" approach and shift to a "collaborative searching" approach when the client ceases to be defensive or dependent. He writes on a cue card: nondirective (dependent-defensive) collaborative and checks each as he passes it.
	2. A reading teacher wishes to remind himself that when a child makes a word recognition error the teacher's task is to: validate (double check the error), prompt a correct response, call for the response without prompts, etc. He writes key words on a card.
b. Instructions (a procedural guide or steps, or a catalogue or index or set of tables or thesaurus).	1. Student goes to library to find a book. He uses card catalogue and directory map of floor and section locations of books of different numbers.
	2. Teacher wishes to know what materials to use for remediation of specific difficulties or how to conduct the remediation. He uses an index to find the materials (computerized or manual) and follows step by step procedure there unless he knows procedure and can list key words and use cue cards.

c. Examples (a completed task or illustration of how-to-do-it including rules (instructions) as well as the example.	1. Teacher is scoring a creativity test. He uses a set of rules together with examples. 2. A researcher is figuring out the budget sheet on a research proposal. A completed budget sheet would be helpful together with the rules.

Illustration of Procedures.--There are of course some illustrations above. Here we present illustrations from the field of imaginative writing or writing poetry.

Cue Cards.--In teaching students to imitate certain poetic forms a directory or index is all that is needed as a reminder. After a little use most will be memorized without having a special exercise on it detracting from the more important creative work. Thus to prompt syllables per line for different forms simply have a summary cue card: Haiku (5, 7, 5), Tanka (5, 7, 5, 7, 7), or to prompt rhyme scheme you may have: Shakespearean sonnet (ABABCDCD, EFEF, G, G), Quatrain (A, B, A, B, or A, B, C, D, or A, A, B, B, or A, A, B, A, or A, B, B, A, or others).

Instructions.--In teaching a student to write metaphor there is no need to have him memorize the definition or procedures. Instead, giving him a variety of models or algorithms which you have taught him to use (by demonstrations) is all that is necessary. Then he may simply refer to a page summarizing the procedure, for example as follows:

1. List words (nouns) from your poem.

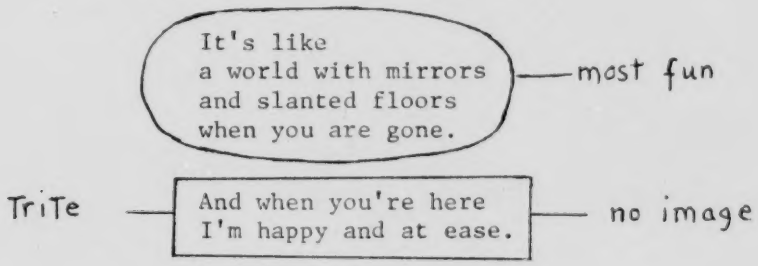
2. Write a descriptive word for your column #1 word for color, taste, sound, action, age, etc.

3. List another thing, event or object which can also be described by the quality listed in column #2.

4. Write a statement of the form: "the" (column #1 word), "is" (column #2 word), "like" (column #3 word). Obviously if fewer cues are needed this may be reduced to a cue card and if more is needed it may be extended to an example.

Examples.--Some material cannot be fully understood or used as a guide by simple cue card words as prompts, or even by detailed procedures alone. Examples are sometimes necessary. Thus, in imaginative writing it is important for the process of revision that a writer go back over his work and discriminate what is "good" and "bad" in terms of his own purposes. In the initial stages of learning there is no need to memorize the procedures or terms to be able to use them with simple one-word

mnemonic aids on cue cards. That will come later, naturally, as a result of much use. Thus, if you ask the novice writer to go back over his poems and box in sayings which are trite, have no image, are not interesting, most fun, etc., it is best that you also give him examples as a guide to his own checking. Thus,



Steps Eight and Nine: Design a Feedback System and/or Incentive System

Label and General Description.--Feedback system. Feedback is the process of providing information to a person (or machine) on how he is doing so he can control or improve his performance.

Procedural Guide.--

1. Determine whether the problem is a feedback or incentive problem. Check to see if the following conditions are present. If they are, consider implementing a feedback system.

   - the job is sometimes done correctly and sometimes not.
   - the job is sometimes done efficiently and sometimes not.
   - if there is pressure by threat or reward the job is done well.
   - if you point to the deficiency, the person can make the correction himself without assistance.
   - the person does not know he is doing poorly, but could easily make the discrimination without training if he were told clearly.
   - someone else is correcting the person's work or helping him to get it out correctly or on schedule, but with proper scheduling or feedback he could do it alone.

2. The procedures for improving a feedback system are quite simple. There are two major steps: look at the current system together with its performance and design and implement a new system including a look at its performance.

Get a description of the current system, diagram it and get information on its performance. An example follows:

Setting.--Directors of federally funded projects for disadvantaged students in each elementary school are required to send in monthly reports of activities and problems to the district director.

Description of Currently Operative System.--

(1) School directors write reports.

(2) School director inspects own report.

(3) If it is OK, he sends it on for district approval.

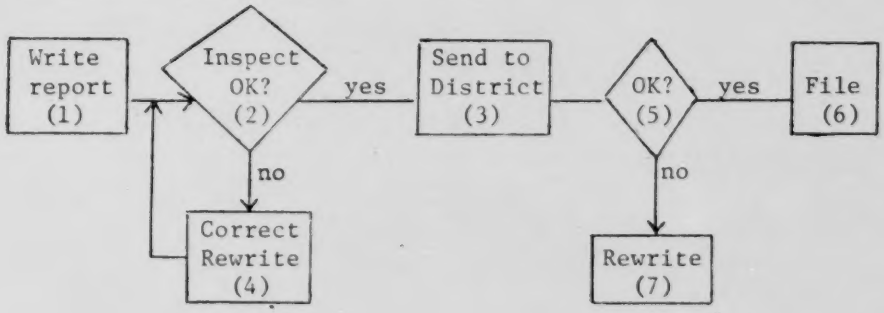
(4) If it is not OK, he corrects it and reinspects (Step 2).

(5) The district director inspects it.

(6) If it is OK, he files it.

(7) If it is not OK, he rewrites sections.

Diagram of Currently Operative System.--



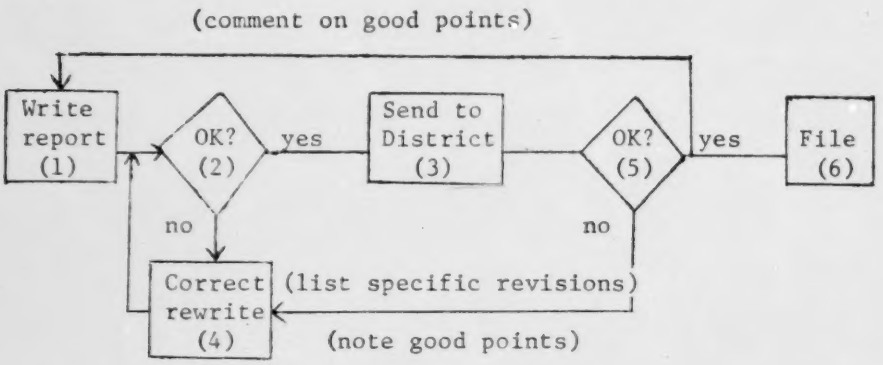
Performance of Currently Operative System.--

(1) District director complains: "I had to rewrite most of his reports. They are in technical jargon. Our school patrons cannot read them. The descriptions of activities and problems are vague."

(2) Once, the district director returned the report to the school director for a rewrite and it came back in excellent form but the district director found it unpleasant to have to return it and wait for it.

(3) School director complains that no one ever says thanks for the many hours and good work but you sure hear the rumors through the grapevine about the bad work.

Revision of System.--



Note that the two changes made in the system are offshoots of Step 5. The district director inspects the report. If it is OK, he tells the report writer it was an excellent job. If it is not OK, he sends it to him to revise. This solves all three problems in the system listed above: district director complaints of having to revise, school director not consistently writing good reports and school director complaining about lack of appreciation for good work.

---

3. If feedback alone does not solve the problem and if it is clearly not a problem falling into other categories above, try developing an incentive system as follows:

   a. Interview and/or observe to determine presence of aversive consequences for desired behavior or lack of positive consequences for desired behavior or presence of positive consequences for undesired behavior. Such questions as when did the undesirable behavior occur last? What did the person do or say who emitted the undesirable behavior? What happened then? What were the consequences to you or the person emitting the undesirable behavior or to others? When did the consequences occur? How long after the undesirable behavior? What are the alternative behaviors you prefer in place of the undesirable behavior? If he behaved the way you wanted him to what would be the consequences to him and others?

b. Institute corrective action for eliminating undesired behavior and substituting desired behavior. Consider the following techniques: adding positive consequences for desired behavior, removing positive consequences for undesired behavior and removing negative consequences for desired behavior.

c. For more detailed statements of techniques and procedures see texts on behavior modification. The only additional prompt mentioned here is some hint as to procedures for identifying positive consequences to use. The simplest procedure is to attempt to identify naturally occurring positive consequences. Thus, if completing an assignment serves as a positive consequence for a student and he can never complete one, sometimes it is desirable to break up the assignments into smaller chunks. Or if mathematics is more reinforcing or satisfying than English then scheduling study time so the student studies math after English is likely to increase completion of English assignments. In general high probability behaviors in free-choice situations may be used as positive consequences. Thus, if a student has a friend whom he calls each day to tell about his successes, that friend's listening may be considered a potential positive consequence to increase say the number of lines of poetry written by the student each day.

Illustrations of Procedures.--Some illustrations are given above under the procedures section.

Step Ten: Design Management Solutions

General Description.--Sometimes there is too much to be accomplished within a given period of time or there are competing responses, well-learned in the performer's repertoire which come out in the usual performance situation and interfere with the acceptable responses. These then are interfering conditions or scheduling or organizing problems.

Procedural Guides and Illustrative Techniques.--There are a number of analytic techniques that may be used for determining the nature of interfering conditions on the job. These are briefly described and illustrated here.

1. Sociometric Techniques.

   The sociometric techniques have more potential generality of types of use than is represented in the literature and in expectations of teachers and educational program directors. Generally the technique may be used to assess the frequency, value and possible determinants of any interactions (actual, expected,

desired or fantasied) between individuals. Thus, it can help us to answer questions like the following: what is the frequency and nature and perceived value or effect of contacts between boys and girls, high scorers and low scorers, blacks and whites, professors of linguistics and professors of education in language arts, and secretaries and various subgroups including staff - students - visitors. Although the basic data is usually obtained by questionnaire it may be gathered by observational systems or otherwise. The data provided by this technique simply raises questions which might lead to further observation or to tentative diagnosis and problem solution tries.

Gronlund, N. E., *Sociometry in the Classroom.* New York: Harper and Row, 1959.

This is a comprehensive procedural guide for sociometric technique development, administration and scoring, and for the interpretation and use of data.

Bonnie, M. E. "Sociometric Methods," *Encyclopedia of Educational Research*, 3rd ed. New York: MacMillan, 1960.

This survey provides reference to numerous applications of sociometric techniques.

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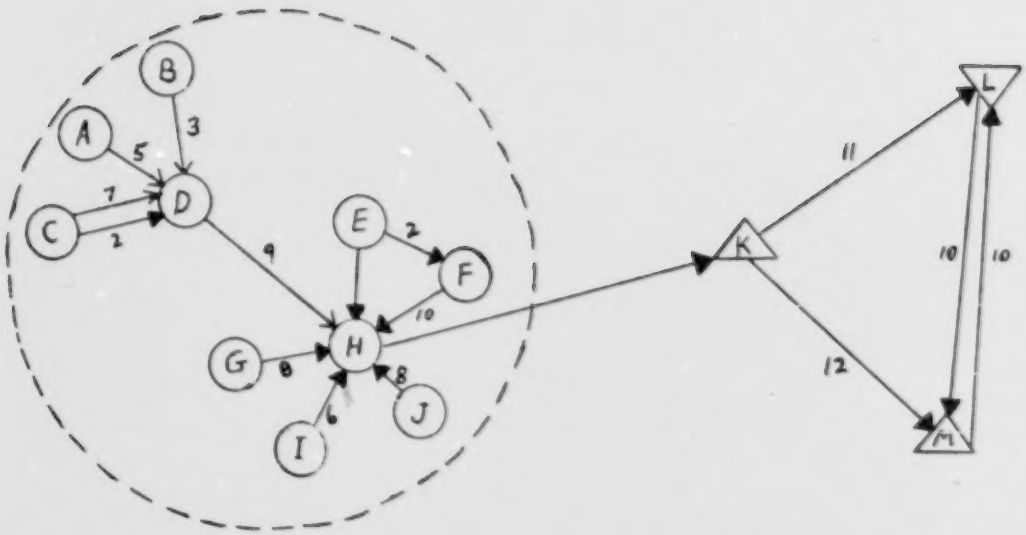
An Exercise in Interpretation

Setting: Communication flow among a school system administrative, supervisory and teaching staff.

Communication function: Requesting and receiving information on how to handle problems of grading, instruction and discipline of ethnic minorities.

Sociogram representation: The sociogram below together with the interpretive key represents the results of a school staff analysis of frequency of requests on the communication function described above.



(X) = School personnel. A, B, C, E, F, G, I, J, are teachers, D is a guidance director and counselor, H is a principal.

△ = K is community representative to the school for the ethnic minority, L and M are informal representatives.

⟶ = Requests for information satisfactorily responded to; arrow indicates direction of request.

⟶ = Requests for information not satisfactorily responded to.

6/ = Number of requests made.

- - - - -

To get an idea of the kinds of information provided by a sociogram try answering the following questions for the sociogram above:

1. How would you describe the communication pattern in your own words?

2. List several plausible reasons for the communication patterns surrounding D, several for the pattern surrounding H, and several for the pattern surrounding K.

3. What relationships should be maintained, discontinued or modified? What action would you take as a direct advisor to the school for this problem area?

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2. Systematic Observation Techniques.

Systematic behavior observation is essential to a complete evaluation of educational programs. When an educational program is clearly specified, it is essential to know whether in fact the program was followed. Otherwise data on performance of students under the program cannot be interpreted as influenced by the prescribed program. Also, systematic behavior observation has diagnostic value in identifying behaviors interfering with target behaviors. Simple procedures have been developed to allow the evaluator to tailor-make observation systems for a specific program. The use of such data for research in individual subject repeated measures designs or group designs is not considered here, nor is its use in program monitoring.

Procedure:

Bijou, Sidney W., Robert F. Peterson and Marian H. Ault, A Method to Integrate Descriptive and Experimental Field Studies at the Leval of Data and Empirical Concepts, *Journal of Applied Behavior Analysis*, 1968, 1, 175-191.

(Procedures in conducting a descriptive field investigation are specified. An illustrative study of the behavior of a 4 year old boy in a nursery school is presented.)

Johnston, Margaret K. and Florence R. Harris, Observation and Recording of Verbal Behavior in Remedial Speech Work in Sloane, H. N. Jr. and MacAulay, Barbara D. *Operant Procedures in Remedial Speech and Language Training*. Boston: Houghton-Mifflin, 1968, pp. 40-60.

(Procedures for systematic observation in language training programs are described and their use for research, diagnosis, procedural planning and evaluation of progress is discussed.)

Illustrations of Use:

Murdock, Everett E. and Della-Piana, Gabriel M., Contingent Stimuli in the Classroom, *National Society for Programmed Instruction Journal*, 1970, 9, 6-9.

(A checklist for observing and recording frequency of teacher use of contingent reinforcement is described together with preliminary data showing that many teachers do not make great use of positive reinforcement contingencies unless trained to do so. See also the article by Bijou, Peterson and Ault above for a comprehensive illustration of the techniques of systematic behavior observation and analysis.)

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SUMMARY OF BIJOU, PETERSON, AND AULT (1968)
REPORT OF THE BEHAVIOR OF A BOY IN
A LABORATORY NURSERY SCHOOL

The boy (Z) was 4.5 years old, Peabody IQ of 116 and middle class. Interobserver agreement in using the observational system exceeded 82% for "social contact" behavior and 95% for "sustained activity." Social behavior was assessed during art, play, snack, story time and show-and-tell. Some illustrative data are as follows: During snack time, Z talked to classmates 21% of the time and they to him 7%. During play time he talked to them 38% of the time and they to him 10%. During academic periods the teacher talked to Z 69% of the time during reading, 71% during writing, and 58% during arithmetic. He talked to the teacher an average of 44%, 41% and 3% of the time in reading, arithmetic and writing, respectively. Such data has numerous uses. It may become adequate normative or baseline data for behaviors to be modified and follow-up observations could then indicate the effectiveness of the treatment. It might be diagnostically valuable and thus suggest treatments or further studies on the relationship between teacher behavior and pupil behavior or the contingencies operating to make a behavior occur at a higher rate in one situation than in another. And it might be used as a monitoring system to help maintain appropriate behaviors.

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3. Critical Incidents Technique.

The Critical Incidents Technique is designed to systematically gather and categorize behaviors which have previously been critical to success or failure in a specific performance task. These behaviors may then be used in making decisions about personnel selection, training, or measurement of proficiency. The method capitalizes on the use of impressionistic data to provide a diversified sample of behaviors.

Procedures:

Andersson, G. D., and S. G. Nilsson. "Studies in the Reliability and Validity of the Critical Incidents Technique," *Journal of Applied Psychology*, 1964, 48, 298-403. This research demonstrates that although the

Critical Incidents Technique relies on subjective data, validity and reliability are high for the final listings of incidents.

Cronbach, L. J., *Essentials of Psychological Testing*, New York: Harper and Row, 1970, pp. 407-409. A brief summary of the application of the technique to personnel selection and classification. Suggestions are also made about some limitations and extensions of the method.

Flanagan, John C., "The Critical Incidents Technique," *Psychological Bulletin*, 1954, 51, 327-358. A comprehensive introduction to critical incidents technique procedure with descriptions of variations which would adapt the general principles of the technique to local situations and purposes is presented in this article. Flanagan discusses the limitations and precautions to be used with the technique.

Illustrations of Use:

Eilbert, L. R., "A Study of Emotional Immaturity Utilizing the Critical Incidents Technique," *Univer. Pittsburgh Bulletin*, 1953, 49, 199-204. An excellent example of the use of the Critical Incidents Technique in behaviorally defining a psychological construct such as "emotional immaturity."

Jung, Steven M. "Evaluative Uses of Unconventional Measurement Techniques in an Educational System," American Institutes for Research, 1971 Arastradero Road, Palo Alto, California. Useful in describing the process of moving from an undefined educational goal such as "student initiative" to a functional description of behavior through critical incidents.

Kirchner, W. K., and M. D. Dunnette, "Identifying the Critical Factors in Successful Salesmanship," *Personnel*, 1957, 34, 54-59. Incidents collected from sales managers suggest more profitable behaviors for salesmen and provide criteria to assist in personnel selection.

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SUMMARY OF JUNG'S (1970) STUDY UTILIZING
THE CRITICAL INCIDENTS TECHNIQUE

Jung used the above questionnaire to collect incidents of student behavior from teachers using an innovative educational system, PLAN. The incidents returned on these forms were then analyzed and reduced to six

categories. Students from PLAN and from traditional classrooms were next asked to report their own activities in the general areas suggested by the six categories, and these activities were classified as critical or not critical.

Some of the general goals from which specific incidents were derived were: self-responsibility, self-management and resourcefulness. Some of the specific behaviors derived were: started assignments promptly without reminders, planned or completed a strategy or schedule involving several tasks, did an unusually thorough job on an assigned task, etc. The number of critical activities of PLAN students compared with the activities of students from other classrooms indicated that PLAN students were more involved in "independent learning activities" and "community service."

Although the data collected by PLAN from these questionnaires was not considered definitive because of sample limitations, the Critical Incidents Technique proved useful in transforming general educational goals into observations of some forms of student behavior which could be quantified and made a matter of public record. This was accomplished with a minimum of expense and in a relatively short amount of time.

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Step Eleven: Developmental, Validational and Utilizational Testing

Developmental Testing.--Test initial frames (20 or more) with three persons from the target population. Revise frames and recycle developmental testing until the entire program is written and it effectively teaches a new sample of three persons to a desired criterion such as "all three persons are to get 90% or better on Part I of the Criterion Test and 100% on Part II of the Criterion Test."

Procedural Guide.--There are six basic steps in developmental testing.

1. Take your program of about 20 frames to a student and ask him to complete the program.

2. Test the program without external rewards so that the relevance of motivation to performance may be tested.

3. Sit by the student and record his comments as he goes through the program. Note whether he turns back to previous frames. Record any deviations from specified procedure (e.g., looking at the answer before writing his or not checking the answers after he has written his). Ask him how he reacted to the program in general. (How did you feel about the program? Was it difficult or easy? Interesting or kind of dull?) Then narrow down to more specific questions. (What was most difficult? What part did you find of least interest?) Explore reasons for student's

responses. (What made it difficult? What would have made it easier? What would have made it more interesting?) If the student emits an incorrect response, see if it is because of lack of the response (call for it directly) or not having it under control of the program stimuli. (Try other discriminative stimuli or prompts to get it out.)

4. Edit frames using the Swiss cheese test (are the blanks to be completed scattered anywhere like Swiss cheese or carefully placed to assure practice of the significant response), the blind test (can the response be made without looking at the instructional material preceding it), and other frame editing principles.

5. Use a sequential testing and revision procedure. Test program on one student and then either immediately revise or go on to another student, depending on whether the observed weaknesses with one student are major and would prevent checking out other weaknesses (if so, revise) or whether you can learn additional things by another tryout (go on to another student). At any rate, no more than three students should be necessary for developmental testing and revision.

6. Revise the program and prepare it for validational testing evaluation on a sample of 30 or more persons. When you revise take into account the reasons for lack of response or erroneous responses and revise accordingly. Thus, if instructional material is simply not being read maybe most of it is unnecessary or poorly written or too overwhelming and all you have to do is clarify what is important by underlining, arrows or boxing in. Or if students can't complete an example, examine your example to see if it is clear and check on the rules or procedures to be sure they are clear. If it is not necessary to memorize a rule don't ask for it nor assume it is learned, spell it out each time. If students get an item right once and later miss it be sure there is practice without prompts until at least two successful unprompted trials and if necessary repeat calling for the response at increasingly longer intervals.

Illustrations of Procedures.--The following report illustrates the kind of analysis that can come out of developmental testing. The content is instruction in how to write metaphor, but the technique applies equally well to other subject matters.

1. Programmed Metaphor was tried out on three persons (sixth graders). The results were as follows:

   a. Items 1 to 5 created no problem; all correct.

b. Items 6-8 (remedial branch for error on 5) were taken by one sixth grader in spite of correct performance on 5.

c. Items 9-10. No problems; all correct.

d. Items 11-17 were mostly completed in a formally correct manner by one person, but the completions lacked semantic significance and aesthetic effect occasionally.

e. Item 13a for one sixth grader was completed as, "My bed is hard."

The item called for completion of my bed is _____ using a metaphor or simile of a boat comparison to bed. Thus, the steps in the process were not clear.

f. Some fair metaphors were produced.

Item 12. Ice cream is female
It is usually sweet
It melts and gets soggy
Or is too hard to manage
But it still tastes good.

Item 14. A salesman is like a sun
Making you warm
And sometimes making you feel terrible.

Item 15. The faucet is a killed car
That sputters
When it doesn't operate
It's cold and sometimes hot.

Item 16. Mervin is like weather
He is damp
Has hazardous habits
Also unpredictable.

g. One person stopped on Item 15. She said she couldn't concentrate. Her item responses added no information beyond the other sixth graders' responses. Her comments did though. She said that, "bed and boat on Item 13 didn't click for me." "I wish I'd had something like this when I was in sixth grade." "I didn't get the idea on Items 11 and on as to what you wanted."

h. None of the students understood that we were simulating a process for writing metaphor clearly enough to articulate it although they responded as if they had the "concept."

2. Interpretation of results and suggestions for revision.

a. The material was generally motivating. Respondents who just looked it over made pleasant noises. One sixth grader went through it with some enthusiasm and the others found it valuable. No general revision needed for motivational effect.

b. The discriminations were effectively taught in very few frames. No revision needed here.

c. Items 13 a and b were under-prompted for one sixth grader. 13a, My bed is _____, was followed by a request to finish the comparison with a simile or metaphor. No suggestion that it should be based on the above associations. Bed - travel - boat. Add a prompt to that effect if program is kept as it is.

d. Items 12-17. Responses for one sixth grader were all good metaphors with fair use of context to "make it happen." But they are more like jingles than poetry and more stereotyped than a representative selection of metaphor. Thus, it seems clear that we need an analysis of metaphor to identify types of metaphor and define their composition so that "pattern practice" exercises may be built similar to syntactic pattern practice so as to get greater variety. The form of most of the context we got was just like the simile or metaphor statement itself.

> Mervin is like weather
> He is damp
> (He) Has hazardous habits
> (He) Also (is) unpredictable.

More poetic metaphor, of course, changes its syntactic patterns or varies them. Thus we shall identify some metaphoric patterns and add that kind of practice to the program. Also, we shall eventually fade away the topic line in some of the poems. Thus, Roethke's Big Wind does not ever state the metaphor that "The greenhouse is a ship." Instead, he makes that happen by beginning:

> Where were the greenhouses going
> Lunging into the lashing
> Wind driving water
> So far down the river
>
> We stayed all night,
> Stuffing the holes with burlap;
> But she rode it out,
> That old rose-house.

e. The lack of a "click" on Item 13 for one of our students and the general confusion over the form of Items 12-17 suggested the obvious observation that, poetry being a personal matter, not all students will be "grabbed" or "click" with the same metaphor. This and the need for an "advance organizer" or overview suggest that we might add a series of items "simulating" the writing of some verse by two or three different poets so that each student may choose his own poet (or poem) to follow through the creative process. Thus, following Item 10, we will present three poems and let the student choose one to follow through a simulation of how the poet might have created it.

3. Revision of the program.

   Items 1 to 10 will remain the same. Other items will be written according to the prescription stated above.

Validational Testing.--Conduct validational testing, analyze results and revise the program. This is the first large group testing. It should be conducted on as many groups as needed to assure generality of effectiveness over the population for which it was intended.

Procedural Guide.--Validational testing should include the following procedures based on a tryout of the program on a group of 30 or more persons from the target group in the first stage of testing.

1. Do not begin validational testing until developmental testing is complete. Validational testing is large group testing (N = 30+) and developmental is single subject test and revision process until criterion behavior is achieved in three consecutive Ss from target population.

2. Administer the following to a group of 30 or more Ss in validational testing. Administer "a", "c", and "d" to a control group if the question of developmental change or influence of test on performance is relevant.

   a. Pre-program tests.

      (1) Prerequisite behaviors test.

      (2) Criterion test--pre.

   b. The instructional program.

   c. Post-program Criterion Test.

   d. Retention Test (30 days or more following post-program test).

3. Analyze results from the validational testing at least in the following ways:

   a. Percent of Ss getting each item correct on each test.

   b. Percent of Ss getting each frame correct on program.

   c. Percent of Ss meeting the criterion goal (e.g., 80% of Ss getting 80% or better performance on each subtest and no single S getting lower than 60% on any subtest.

   d. Cutting scores on prerequisite behavior tests that best predict who will achieve an acceptable score on the Criterion Test.

   e. Total time to take tests (range, median, and total time for each S).

   f. Total time to complete program (range, median, and total time for each S).

4. Interpret data and propose appropriate revisions, additions, and suggestions for program use.

5. A general format for reporting validational testing data is presented below.

Utilizational Testing.--Following validational testing, any revision and recycling that is necessary should be carried out. Then the instructional package should be put in final production for use by others. This means that instructions must be explicitly stated for use by others. At that point, there should be "Utilization Testing" in which the package is given to someone else to use and its effectiveness is assessed under those conditions. The problems of integrating the use of such material into a regular class and the impact of the material on changes in teacher behavior or administrative practices in the school must also be assessed.

For examples of Utilization Testing, see Della-Piana, G., Hogben, M. and Anderson, D. "A Scheme for Maximizing Program Effectiveness," Educational Product Report. Guilford, Connecticut: EPIE. March 1969, Vol. 2, No. 6; and Keller, F. "Neglected Rewards in the Educational Process." Proceedings of American Conference of Academic Deans. Los Angeles, California. January 1967.

Figure 3-2

Summary Data Sheet
on Validation Testing

Program Title_____

Author_____

Date_____

Measures	Students 1	2	3	4	5	6	7	8	9	10	... 30
Age											
Grade Placement											
Prereq. Behaviors											
a.											
b.											
c.											
Pretest Total Score											
Pretest Time											
Total Program Time											
Total Errors (program)											
Post-Test Total Score											
Post-Test Time											
Retention Test											
Retention Test Time											

This summary must be accompanied by a description of the program and tests to make the table interpretable. For example, how many items in the pretest, description of pretest, copy of pretest, ditto for prerequisite behaviors, what is rate (e.g., frames per minute?), etc.

Also there must be a description of conditions for administration and use of the program.

Also include an item analysis matrix (student by item) for program frames and pre and post tests.

CHAPTER 4

SUMMARY AND RECOMMENDATIONS

The three major purposes of the project were to develop a preliminary version of a programmed text for teaching the writing of poetry, validate the program and outline procedures or a model for programming.

The report presents products relevant to all three purposes of the project. A 156 frame program was developed through three stages of design testing and revision. Data on validation is presented for all three phases although the final program was only validated in part (55 of the 156 frames). Also a procedural guide or model for program development is presented. A summary of the report follows together with recommendations for further work.

The development of the program is described in three phases. In Phase One the preliminary design was formulated. The process began with an attempt to specify the content and behavior of the program based on analyses of what writers have said about how they write poetry. This was then matched against taxonomies to fill in the gaps. Initial development including tryout of the criterion test, sequencing of instruction and tryout and revision, collecting of rules and examples, writing a preliminary program and trying out the program. In this phase the major changes were eliminating frames calling for definitions of poetic devices, searching for ways to make metaphor not only formally correct but poetic, and the introduction of a simulation of the process of writing a poem to give the writer an overview or advance organizer to both motivate and guide his continued work.

In Phase Two of the program development the first generation complete program was written. The major accomplishments included moving from a straight reinforcement to an elicitation approach to getting free written expression from students (viz., using a collage of current magazine illustrations), providing some structure for initial poems (Tanka and Haiku), and suggesting procedures for making free writing more concrete and imaginative.

Phase Three of program development resulted primarily in the production of the second generation program of 156 frames and a tryout of the first part of the program. This program differed from earlier versions primarily in three ways: the provision of structure to improve the elicitation of fluent written expression, the provision of structure to aid revision and the extension of treatment of poetic devices such as consonance, onomatopoeia, rhyme, meter, stanza form, technique and imagination.

The validation of the final program was limited to about the first 55 frames of the 156 frame program. The tryout was on two ninth grade classes--one experimental and one control. A pretest posttest control group design was used. In addition to the criterion pretest a set of cognitive tests were administered to both groups with the pretest. Major results of the tryout were as follows. Interjudge agreement on an objective scoring system was .94. In addition junior high school and college judges ranked poems subjectively according to their own impressions. On the tests scored according to the objective scoring system (non-triteness; use of rhyme, rhythm, alliteration; consistency of content or imagery, etc.) experimental students (those using the program) gained significantly over the 8 week period whereas control students did not and the amount of the gains of experimentals was significantly greater than that of controls.

Four of the seven cognitive reference tests (Associational Fluency, Simile Interpretation, Word Beginning and Endings, and Vocabulary) correlated significantly and positively with one measure of criterion test performance (highest poem score). Only one test (Simile Interpretation) correlated significantly with pre-post difference scores and that correlation was negative.

On subjective scores there was far more agreement among college judges' rankings (.69 to .75) than among junior high school judges' rankings (.12 to .50). The junior high judges ranked posttest poems lower than pretest poems but college judges ranked posttest poems higher (as was true in the objective scoring system). Poems were not rated of high quality by college judges (very poor to good) but were rated more favorably by junior high school judges (very poor to excellent). The criteria used by junior high school judges differed from those used by college judges. The latter emphasized more formal criteria and the former emphasized more the effect of the poem on the reader.

Students gaining most from pretest to posttest (i.e., the top 20%) scored significantly higher than the remaining students on three of the cognitive reference tests (Associational Fluency, Associations and Vocabulary). No students in the control group were among the top 20% so they were left out of this analysis.

The elements of a linguistic theory of metaphor are outlined together with implications for programming instruction in metaphor writing. The procedure followed included six basic steps: search for metaphor in English poetry to identify types of metaphor occurring in about 1,000 poems in anthologies of children's poetry, linguistic analysis of the patterns identified, formulation of a linguistic theory (the feature system) to account for the metaphor patterns, writing of definitions to account for the major occurrences of metaphor, production of paradigms to get students to produce metaphor and the refinement of the paradigms based on individual

tryouts. The use of the computer as an aid to the poet as writer is outlined including tasks such as finding a word of a specific form or function class and semantic constraint that is in assonance or consonance with another word, finding words with high association value for a selected metaphor to help in writing the context that makes the metaphor "happen" or "be believable" or "come alive," and finding a metaphor. Essentially both the computer and non-computer programs are seen as means for giving the apprentice poet more or less rapid access to material which he might make into poetry.

A procedural guide for the development of programmed materials is outlined in eleven steps as follows:

1. Rough statement of goals.

2. Statement of formal specific objectives.

3. Development of mastery tests of the behaviors specified in the objectives in a degree of simulation to the "final behavior" that is most effective and efficient.

4. Determination of the discrepancy between current and desired performance.

5. Rough characterization of the cause of performance deficiencies noted into one of five categories: knowledge or skill deficiency, job situation guidance system deficiency, job situation feedback system deficiency, performer motivation deficiency and/or job situation incentive deficiency, and performer competing or interfering responses or job situation interferences.

6. Construction of instructional systems for knowledge or skill deficiencies.

7. Design of prompting or guidance system where appropriate for knowledge or skills that are deficient but that do not need to be "learned."

8. Design of feedback systems for deficiencies in "knowing how I am doing."

9. Design of incentive systems for motivation deficiencies.

10. Design of management systems for "interfering response" conditions.

11. Developmental, validation and utlilizational testing for any systems developed.

Recommendations for further work grow out of each section of the report. The major directions for further work should include the following:

1. Development of multiple cutoff scores for cognitive reference tests to predict criterion test success (writing poetry) at a mastery level after exposure to the total program.

2. Development of computer programs as aids to a poet in the process of composition (e.g., finding a word of a specific form or function class and semantic constraint that is in assonance with another word) and development of computer programs to test algorithms for producing metaphor.

3. Developmental testing of the entire 156 frame program to refine each frame or frame sequence until it produces criterion behavior.

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APPENDIX 1

CRITERION TEST

1. Look at the picture on the next page. Study it carefully. Do you find some things that remind you of your own activities or reactions or experiences? Look until one or more things strikes you strongly and then write anything that comes to your mind. Begin writing now and keep writing for 10 minutes. If you get stuck and can't write more just look at the drawing again or look at what you have written and if it reminds you of something else write it. Write in your workbook. When you finish writing go on to frame number 2.

2. Go back over what you wrote and find a phrase or group of from 2 to 10 words that make you personally react strongly with some emotion such as laughter, crying, feeling alone or not alone, makes you afraid or makes your spine tingle or toes twinkle. Underline the one group of 2 to 10 consecutive words that does this to you and then go on to frame 3.

3. Go back over what you wrote again. This time find a sentence or two that says something you feel you could talk about for hours and have something new to say almost every minute. Draw a line to box in those words like we have done for this sentence and then go on to frame 4.

4. Go back again to what you wrote for frame 1. This time circle any single words or 2 or 3 words together that you like very much for any reason. Whatever turns you on. Then go to frame 5.

5. Look over what you have underlined, boxed-in and circled on your own free writing. Write in your workbook the number of the box which best represents your feeling about what you wrote.

would hate to write more about it	would prefer not to write more about it	have no preference either way	would probably like to write more about it	would very much like to write more about it
1	2	3	4	5

You may also write any comments that come to mind. Then go to frame 6.

6. Now go back over the material and pick out a sequence of things that say something you want to say. Pick things that go together to tell a story that has a beginning, a crisis or conflict and an ending or resolution.

This is a collage which is in the programmed text, page 1(a), Appendix 2.

7. Write a poem now using the sequence of ideas you have recorded. Make the poem 10 lines long. Use any form you wish. You may use any rhyme scheme you wish or even no rhyme scheme. You do not have to rhyme. You may have any length of line you wish, any number of syllables per line and any meter. You may look back at your previous work. When you finish go on to frame 8.

8. Now revise your poem until it has the effect you want it to have. Change any part you wish so that it helps you to say what you want to say and how you want to say it. Use any poetic devices or tricks you want to get the effect you want in meaning, form, feeling, or sound. Look back as much as you need to.

APPENDIX 2

WRITING POETRY

A SELF-INSTRUCTIONAL APPROACH

This is a developmental edition of a programmed text. A request is being processed through the Office of Education (Attention: Dr. Morton W. Bachrach) for the author to claim copyright through a period of further development.

WRITING POETRY

A SELF-INSTRUCTIONAL APPROACH

(Developmental Edition)

Bureau of Educational Research
University of Utah
Salt Lake City, Utah 84112

Developed in part under contract No. O-H-004 with
the U. S. Office of Education Small Contract Research Program

April, 1971

ACKNOWLEDGEMENTS

This program was developed in part under a grant from the Regional Small Contract Research Program of the U. S. Office of Education. Project Director is Gabriel Della-Piana. The general design and early development of the program was completed the year prior to the grant by the Project Director.

A number of people have contributed significantly to the development of the program. Joe E. Kirk, poet, helped in selection of supportive material and in conceptualizing the early design. Diana Allen and James Tanner contributed to the linguistic analysis that provided the necessary foundation for the teaching of the use of poetic devices. Leroy K. Johnson selected the Haiku and Tanka used, and conducted tryouts of material. Greg Christensen experimented with procedures for eliciting free written responses. Marcus Smith did considerable rewriting and organization of this version of the program. Sister Rose Clare conducted a search of literature for ideas on the teaching of poetry. The Project Director is grateful to all these people, others who have helped, and to the teachers and students who cooperated in tryouts.

NOTE TO THE INSTRUCTOR

No one has ever explained why some people must become artists while for others any artistic endeavor is a boring drudgery. What is obvious, however, is that particular artistic skills are not something everyone needs to learn. Imaginative writing is not a necessary skill. Satisfactory lives are lived by people who never write poems or stories.

In recent years much has been made of creativity. In large part this concern is the result of a sentimental, over-zealous democracy. The logic seems to run, some people are talented, creative artists; surely, with the proper training, everyone could be. What is overlooked is that persons can be creative in many ways. There is almost no aspect of living which cannot be handled in a creative manner. Artists comprise only a small portion of creative people. Among businessmen, housewives, college professors, manual laborers, everywhere are encountered those people who bring that extra spark to living which makes life richer, more faceted and interesting to live.

So, for most students, the value of a course like this one, one in which they are encouraged to write something for themselves, lies in the added sensitivity they will develop in their reading. Attempting to write will give them insight into the problems encountered and solved by professional writers. They will learn to recognize when a writer has done something worthy of appreciation. The best students will develop a feeling for the intricacies of really fine writing. They will learn to see far into what they read, to the symbolic and structural values.

A smaller group of students will go even further. From their experience with one art form they will begin to extrapolate to life itself. They will develop a new way of viewing themselves, the world about them and their own relationship to that world. They will begin to become artists at living. For these few life will manifold itself. The experience of one lifetime will equal the lives of scores of their peers who have not developed this special skill.

Infrequently there will be a student destined to become a writer. For this young person a course in writing can be of incalculable value. On the one hand it can make him aware of his talent and desire. On the other, it can teach him skills which might otherwise take him years to learn on his own.

Of course, at the far end of the spectrum are those students for whom such a course will do nothing. The danger is that it is often impossible to tell one sort of student from another. The student who seems to be doing wonderfully may have fooled you. He may only be a good

student, one of those youngsters who quickly grasps what is expected and produces it, learning little more than how to be an even better student. And somewhere in your class, among the seeming fumblers, may be a quiet, unexciting student inside of whom something really profound is beginning to stir. It may be weeks, months or years before this new interest becomes evident, longer yet before it reaches fruition.

Care should be taken to avoid discouraging or stifling anyone. Even among professional writers it is difficult to distinguish the good ones from the merely proficient ones. There are so few objective criteria. Attempting to make qualitative judgments about beginning student writers must be nearly impossible.

Above all, imaginative writing should be gone at in a spirit of fun. If it is not fun, what value can it have? For most students it will have none. Taken too seriously, graded too stringently, it will become no more than just one more exercise in an English class, in short, another trial to be endured. Imaginative writing is using the imagination. Dreaming is fun. Writing a poem or story is a kind of dreaming. It can be fun, too. Writing is making up things.

At the simplest level we are, as imaginative writers, concerned with reproducing dreams through the medium of writing. The primary concern is with stimulating the imagination, making it work. At the level of this course it would be foolish to become too critical about what is imagined. We want to teach methods of making the imagination work even when it seems to have bogged down. We want to expand the imagination and we want to make the student more aware of his imagination, what it does and can do, and why. Finally, we want to begin to familiarize the student with those writing techniques which will enable him to set forth the product of his imagination in a literary fashion.

As far as practicable, the student should be allowed to proceed at his own speed. If he wants to repeat exercises he should be allowed to. He should be allowed to return to earlier exercises and if he wants to forge ahead of the class, that should be permissible also. Class discussions with student participation can be invaluable. Talk to the students about what they are doing. Read some of their work to the class. Have certain students explain what they were attempting to write, then open to discussion with the class whether the attempt was successful or not, in what ways it failed or succeeded.

The general design of this book is that of a step-by-step program leading toward the writing of reasonably competent poems and stories. When first conceived, it was thought that there should be two books, one containing the program to be used by the students, the other, a book of

instructions and explanations, to be used by the instructor. On reflection, however, the authors wondered why there should be any secrets kept from anyone. Why shouldn't the students have ready access to everything the authors could say about writing? The conclusion was that they should. Thus, everything is combined in a single volume.

Contributing to this decision was the realization that the instructors administering this program will not all be equally familiar with imaginative writing as a craft. And of course for the experienced instructor what does it matter? Yet for him, for the instructor new to the business, or for anyone attempting to use this book, the best advice we can give is to use it and observe the results and make modifications in your use of it based on your own experience and judgment.

Finally, it is important to note that this is a developmental edition of a program and that the major developmental work comes the first 63 frames. Beyond that the program is still quite sketchy and far more uneven in quality.

TO THE STUDENT

Poetry is not a set of lines with endless rhymes. It is not writing so many measures per line or in some particular meter. Poetry is what poetry does. You may write a poem that is not poetry. There are poems that are defined in terms of so many lines, so many syllables per line and such and such a rhyme scheme. You don't, of course, have to have rhyme to have a poem. As Dylan Thomas wrote:

> Poetry is what in a poem makes you laugh, cry, prickle, be silent, makes your toenails twinkle, makes you want to do this or that or nothing, makes you know that you are alone and not alone in the unknown world, that your bliss and suffering is forever shared and forever all your own. All that matters about poetry is the enjoyment of it however tragic it may be.

This self-instructional text on writing poetry is designed to help you write poems that <u>are</u> poetry. We do ask you to experiment endlessly with form, meaning, and sound. However, in the last analysis you are on your own. Whether or not you have written poetic poems must be judged in terms of their effect on you or others whenever or wherever something in your poem comes whistling or whacking through to the willing or wary reader.

Often one hears it said, "I've got a book in me, if ever I get around to writing it." The feeling that, "I can talk, therefore I can write," is common. It is an easy error to make. Writing, after all, is only words, one thinks. It's a kind of talking in print, isn't it?

Drawing, on the other hand, requires particular skills not so generally common as talking. A piece of paper, pencil or charcoal, and in a very few minutes it becomes obvious to the beginner that he knows nothing about drawing. He readily admits there is much to be learned about the medium.

It is helpful to think of writing as a medium. Words are the essential element of that medium. Words are to writing as paints are to painting. In the hands of a fine painter something transcendent happens to the pigments he uses. Looking at the final product of the artist, the painting, the viewer is conscious not of the pigments but of what the painter has done with them. The artist uses the paints and other materials and tools of his art to create something which transcends the mere raw materials. Canvas, paints, brushes, they are only a means to an end.

In the same sense that painting is not paint, writing is not words. Words are only the most primitive element of writing. Everyone has a few words on hand, the problem is how to use them in such a way as to come up with a little writing.

Most students will have sufficient vocabulary to begin writing. They will also be familiar with some of the simpler elements of technique, such as grammar and punctuation.

Imagination is common to us all, but to use it requires discipline, the ability to stimulate and direct the imagination in a desired direction. It is not sufficient to daydream. For a writer the imagination must become an effective tool. It is with these three elements, words, technique and imagination, that the exercises in this book will be concerned.

It will not always be possible to keep our enquiries neatly compartmentalized, this exercise dealing with one aspect of the craft, a second with some other. In writing they are so interwoven that it becomes impossible to tell if the writer is using technique or imagination. In fact, the writer is always using everything all at once. The successful writer so weds the various elements of his craft that they become a separate sense or skill.

In going through this program you will be required to write many pages of material. Writing, after all, is writing and there is no way to get around the actual work of putting pen to paper. The more you write the more you will learn about writing. Failing to accomplish something often teaches as much as succeeding. The important thing is to try, try again and again. Then discuss what you have done. Try to think of ways to improve your writing, then write again.

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1. Respond When Requested. This program or text does not involve only reading. You will often be asked to write and talk. Other times you are asked only to make a choice between alternative answers. In all cases where you make a response it will be useful to you for some next step in the program.

2. Follow the Frame Format. There are a variety of types of frames or items in this program. Some of them require only seconds to make the appropriate response and others require up to twenty minutes. Often there is no one correct answer. In those cases you can only check to see that you did what was asked. When there is a correct answer write your answer before reading the answer given in the text.

3. Take the Accurate Track. At several points in the program you will be asked to make a choice or state a preference. Typically, your choice will dictate a certain track through the program. This is one way of making the program personal. It is a way of giving you the power to decide what you will study...or how long you will study it. Thus, follow directions carefully to keep on your preferred track. If you wish to go back and review at any time use the Table of Contents as a guide.

4. Feedback to the Programmer. Whenever you disagree with the text or find it confusing or unpleasant or particularly helpful or exciting, make a note of it right in the book in the margin or elsewhere. Any reaction of this sort which you can give to the author will help to improve the program in the next revision.

5. The Poetry Writing Workbook. You should receive a poetry writing workbook. It is a book with blank pages. You should do all your writing in that book. Begin by writing your name, grade, age, teacher's name and date. Then write as you are instructed to do.

   For Example: The first exercise, "number 1" calls for you to write about a picture. This is what you do: Read the instructions carefully. Turn to the first blank page in the workbook. Write #1 (and the date and time) and then write as you are instructed to do. When you finish that put down the time and go on to exercise number 2 doing the same.

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1. Look at the picture on the next page. Study it carefully. Do you find some things that remind you of your own activities or reactions or experiences? Look until one or more things strikes you strongly and then write anything that comes to your mind. Begin writing now and keep writing for 10 minutes. If you get stuck and can't write more just look at the drawing again or look at what you have written and if it reminds you of something else write it. Write in your workbook. When you finish writing go on to frame number 2.

2. Go back over what you wrote and find a phrase or group of from 2 to 10 words that make you personally react strongly with some emotion such as laughter, crying, feeling alone or not alone, makes you afraid or makes your spine tingle or toes twinkle. Underline the one group of 2 to 10 consecutive words that does this to you and then go on to frame 3.

3. Go back over what you wrote again. This time find a sentence or two that says something you feel you could talk about for hours and have something new to say almost every minute. Draw a line to box in those words like we have done for this sentence and then go on to frame 4.

4. Go back again to what you wrote for frame 1. This time circle any single words or 2 or 3 words together that you like very much for any reason. Whatever turns you on. Then go to frame 5.

5. Look over what you have underlined, boxed-in and circled on your own free writing. Write in your workbook the number of the box which best represents your feeling about what you wrote.

would hate to write more about it	would prefer not to write more about it	have no preference either way	would probably like to write more about it	would very much like to write more about it
1	2	3	4	5

You may also write any comments that come to mind. Then go to frame 6.

6. Now go back over the material and pick out a sequence of things that say something you want to say. Pick things that go together to tell a story that has a beginning, a crisis or conflict and an ending or resolution.

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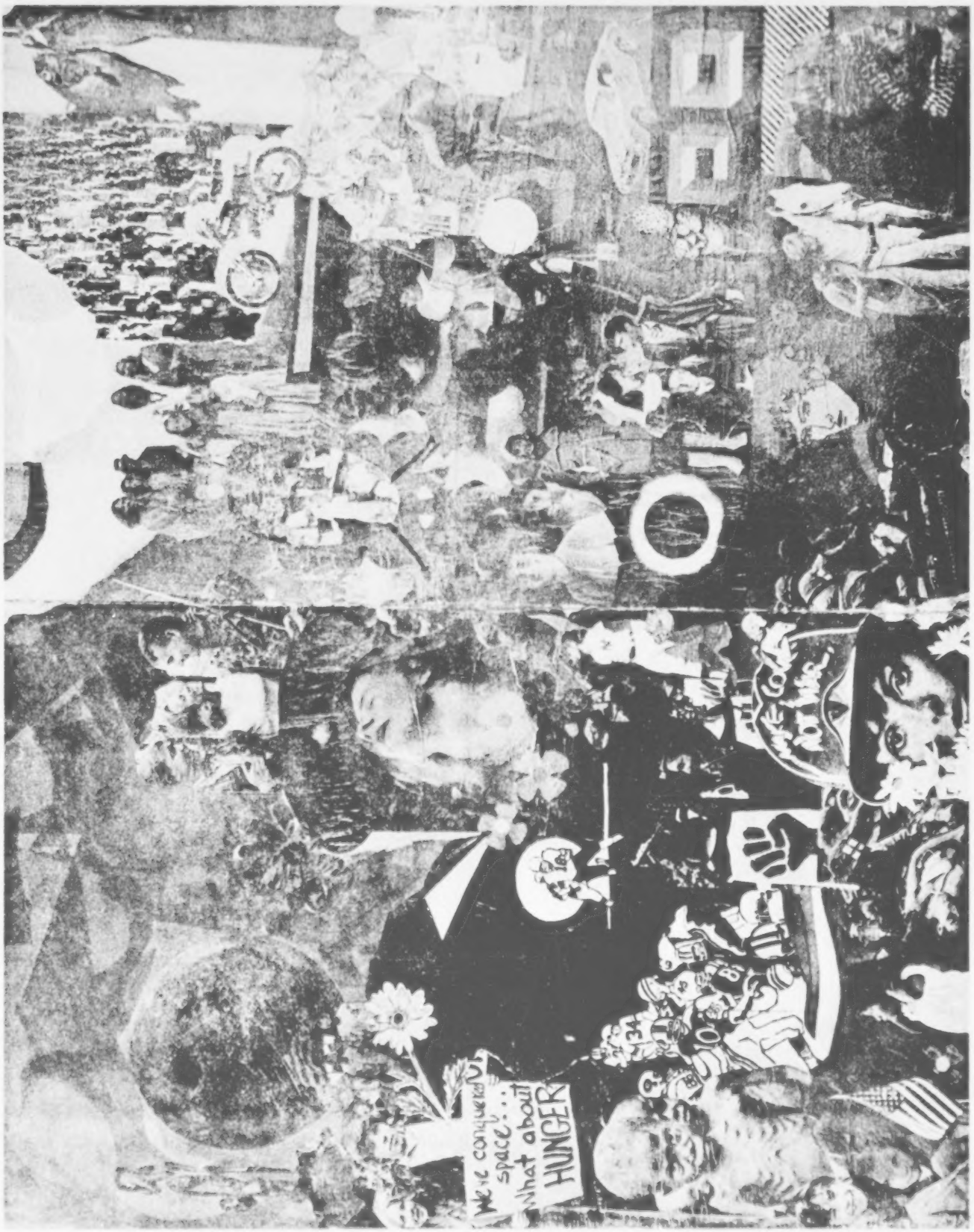

7. Write a poem now using the sequence of ideas you have recorded. Make the poem 10 lines long. Use any form you wish. You may use any rhyme scheme you wish or even no rhyme scheme. You do not have to rhyme. You may have any length of line you wish, any number of syllables per line and any meter. You may look back at your previous work. When you finish go on to frame 8.

8. Now revise your poem until it has the effect you want it to have. Change any part you wish so that it helps you to say what you want to say and how you want to say it. Use any poetic devices or tricks you want to get the effect you want in meaning, form, feeling, or sound. Look back as much as you need to. When you complete the task go to frame 9.

9. At this point you have approximated the steps which might have been followed by a professional writer. Of course he would not have needed to think about the process of his own writing. It would have gone on automatically. But, nevertheless, he would have gone through steps like these in coming to his near-final draft of his poem. Now the writer would allow the poem to "cool off" while he worked on other writing. Then he would come back to it to make more revisions. Most writers have ways of getting many bits of imaginative writing down on paper. We will now have you repeat the process of writing a poem, but take it step by step with more practice.

   The purpose of this exercise is to stimulate you to write down on paper more of what is in you, more of how you see the world around you. Look again at the picture in the beginning of this book. Collect other pictures yourself or look at some collected by your teacher. Write from the pictures not about them. Follow these instructions for your writing:

   a. Write at least 15 reactions in your workbook for 15 separate occasions, numbering each one as follows: 9a (1), 9a (2), 9a (3), etc. to 9a (15).

      Each time you write must be a separate occasion. You may write more than once a day but separate each writing by at least 15 minutes. Also, each time you write do not write more than 10 minutes nor less than 5 minutes.

      Use a variety of ways of reacting to the pictures. The following list suggests different points of view or ways of writing about what you see. Use all of them at least once:

      (1) Write about it as if you are seeing it for the first time, as if it were totally unfamiliar to you.

      (2) Write about anything in it that frightens you.

(3) Write about only the favorable things in what you see.

(4) Describe what happened without using any feeling words (e.g., exciting, depressing, sad, happy) or any judgment words (e.g., good, bad, valuable, worthless, right, wrong). Just describe what is there or what happened or might have happened.

(5) List all the topics you can related to what you see. List all the characters you can think of. List all the sources of information to find out more about what you see.

(6) Describe what might happen if you touched, shook, tasted, smelled, or listened to anything you see in the picture.

(7) Talk to someone else about what they saw or how they acted. Discuss your differences in reaction. Write about that.

(8) Describe ways you could change any objects or happenings in the pictures to improve them.

(9) Describe what would happen if people stopped doing some of the things shown in the pictures. Make up other "what if" situations and describe the consequences.

(10) Describe what you would see if you were a camera with a close-up and telephoto lens; a slow-motion and fast-motion speed; an x-ray lens that allowed you to see into pants pockets, purses and boxes, or a time machine attachment to allow you to see the past or future.

After you have finished writing 15 or more reactions to the pictures using the above techniques go on to frame 10.

10. Now go back to the material you wrote in response to frame 9. Pick some of the material you would like to work with and complete the steps you did in frames 2 to 8 for that material. Write in your workbook numbering each response for frame 10 as follows: 10 (2), 10 (3), 10 (4), 10 (5), 10 (6), 10 (7), 10 (8).

11. Go back again to frame 9 and pick out some other ideas to write about. Again repeat the steps you went through in frames 2 to 8 for this new material and number your writing in the workbook for frame 11 as follows: 11 (1), 11 (2), 11 (3), 11 (4), 11 (5), 11 (6), 11 (7), 11 (8).

12. Go back again to frame 9 and repeat the same process outlined in frame 10 and 11. Do this as many times as you wish until you have written all the poems you care to based on the material in frame 9. Then go on to frame 13.

FINISHING THE FIRST POEMS

13. You now have no fewer than four poems. These four poems may be thought of as having been carried through all but the final revision. However, if you feel they can yet be improved on the basis of what you learned feel free to rewrite them as many times as you feel necessary before carrying them through the program suggested below. When you finish any further rewrites, or if you choose not to continue rewriting, go on to frame 14.

14. Look over the four poems you have written. Pick out the one you like best, the one you feel will be most readily revised into a finished poem. Read it carefully and then see if you can say what the poem is about by reducing it to a simple statement of only a few words. Write the statement in your workbook. For instance, your poem might be:

    about seeing everything more beautiful after you fell in love,
    about the unsatisfactory relationship between a boy and a girl,
    about a disliked relative,
    about trying to smile when your lips are cracked.

    If you find you are stuck, cannot decide what your poem is about, discuss it with other members of your class. At this point it is important that you develop a strong idea of what your poem is about. When you have finished, go on to frame 15.

15. Now that you have decided what your poem is about, re-examine it. Determine:

    a. which parts are clearly what your poem is about,

    b. which parts seem to say little or nothing of what your poem is about.

    In your workbook make a legible copy of your poem leaving enough room between its lines and at the margins to enable you to write notes and line revisions. Indicate by underlining once those parts of the poem which fall under the heading "a" listed above. Indicate by underlining twice the parts of the poem which fall under heading "b" listed above.

16. Read this little poem aloud to yourself until you are able to go through it without stumbling. Try to feel the words in your mouth, what your mouth does as it forms the various words. Listen to the way the poem sounds as you read it. You will find, when you have read it enough times to be comfortable with it, that each word, each line, can be said in only a certain way. Most of the members of your class will, if they read it aloud enough times, reach a

point where they are reading it in a nearly identical manner. When you have finished go on to frame 17.

the prince of the crickets
found solace
in the bud of the flowering sun
and as the day spread
like the wings of a bright moth
he sang his oldest song

17. Now, read your poem aloud to yourself several times, until you read it smoothly and easily. Decide which lines are the ones which are fun to say, the words which combine for nice, pleasing or interesting sounds. Bear in mind that word groups which create a pleasing sensation in the speech organs, the mouth and throat, will tend to be pleasing to listen to. This is not always the case but it is more often true than not. When you have finished go on to frame 18.

18. Having learned how your poem feels and sounds, go through it now, circling the lines which are most fun. The lines which seem to have no interesting sounds, or the least interesting sounds, box in. Make a line from the "circled words" to the margin of the paper and label it "most fun." Make a line from the boxed words to the margin and label it "not interesting." When you have finished go on to frame 19.

19. What lines represent the most intense and original ideas in your poem? This is a very difficult question to settle. Probably you will be wise not to entirely trust your own judgment. Discuss your poem as it relates to this question with other members of your class. Have them read it and give you a reaction.

Ideas as well as words and phrases can be trite, or just patently wrong. If your poem argues for the spherical nature of the earth, it is a correct view of the earth, but since almost everyone knows that already, the idea is trite. If your poem argues for a flat earth it is arguing incorrectly, that is, for something which is patently false. Examine your poem carefully for trite or false ideas. *

Now go through your poem, circling the lines containing the best ideas and boxing in the trite and false ideas. Draw a line to the margin again for these and label them "best ideas" and "trite and false ideas." When you have finished go on to frame 20.

---

* Of course, a poet might want to use a trite argument or a false argument, but to be successful it would have to be done in a special way.

20. We are going to make a judgment about poetry which will subject us to criticism from some quarters. We are going to say that a poem exists only in its particulars, that is, a poem is the images it creates. A poem happens, makes itself known, in terms of how those images are made to happen. But the image is not communicated by stating the idea. Rather it is communicated by presenting the evidence from which the idea is to be recognized. Certain patterns of objects or actions make the idea happen. Ideas coming from images are more convincing and have more power than stated, abstract ideas. They are more poetic. *

Now you must go through your poem again, deciding which lines create images, word pictures of things and actions, and which lines fail to create images, those which state ideas rather than creating images from which ideas emerge naturally. For example, look at the two poems below. One states the idea and the other makes it happen with images.

Poem A	Poem B
(states the idea)	(makes it happen)
In Spring flowers come out suddenly. Some of them are strange and others are very common.	Spring is like a perhaps hand (which comes carefully out of Nowhere) arranging a window, into which people look (while people stare arranging and changing placing carefully there a strange thing and a known thing here) and changing everything carefully.

Now circle the lines or groups of lines in your poem which present the best images. Lines which fail to present images should be boxed in. Again make lines from the circled and boxed words out to the margin and label them "best images" and "no images."

---

* There are poets whose interest takes them far from the use of images. Frequently their poetry is excellent. It is the best judgment of the authors, however, that the most direct route to achieving skill at poetry writing lies through learning the use of imagery. What the students do with their skill, once it is learned, is the business of the students. We are not trying to teach them to be particular kinds of poets. Rather, we want to give them the skills and insights which will enable them to be any kind of poet they may discover they want to be.

Now check your marked up poem against the one below for "form." If yours is marked up like this go on to frame 21. If not, check with a fellow student or the instructor.

Example of Form of a Poem Following
the Exercises in Frames 15 to 20

After you left

I boarded the jet

and tried to sleep.

I died three deaths

before the clouds were gone.

most fun

good image

My scared seat jumped

most fun

to catch the fatal falls

false idea

and I could see

trite

least interesting

the darkness of the dawn.

trite

The trip was smooth.

It's like

a world with mirrors

and slanted floors

when you are gone.

most fun

trite

And when you're here

I'm happy and at ease.

no image

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21. By a system of marks you have indicated the good and bad qualities of your poem. You have:

a. indicated the lines which seem most relevant

b. indicated the lines which have no relevancy to your poem or have little to do with what your poem is about.

c. indicated the lines which are fun to read and listen to.

d. indicated the lines which are least fun to read and listen to.

e. indicated the lines which represent the most intense and original ideas

f. indicated the lines which are least intense and original

g. indicated the best images

h. indicated the lines which are most obviously not images.

FINISH READING ALL THE ABOVE MATERIAL IN FRAME 21 BEFORE BEGINNING TO WORK ON THE REQUESTED RESPONSES BELOW.

You will now move parts of your poem to the next blank page in your workbook. Work line by line from the top and proceed in this manner:

(1) Every line which is underlined once is to be written as it occurs in your revision of the poem in frame number 15. If underlined twice, omit.

(2) Every group of words, line or lines which is circled in is to be written as it occurs in frame 15.

(3) Words, lines or groups of lines which are neither boxed, underlined or circled are to be included as they occur in frame 15. If they are boxed and circled or underlined once, include the line(s) boxed in.

(4) Any word, line or group of lines which is boxed, and boxed only, is to be omitted.

(5) Words, lines or groups of lines underlined twice are to be omitted.

(6) Where lines are omitted the space they would normally have occupied is to be left vacant

(7) When you have finished moving your poem to the next blank page as instructed, you will have a poem with holes in it.

When you have finished go on to frame 22.

22. Compare your poem to the one below. Your poem should resemble in general appearance the one in the example. If it does go on to frame 23. If it does not, re-examine the material in frame 21, looking for mistakes you might have made. If you can find no mistakes which would account for your transcribed poem's being incorrect, discuss the frame 21 process with your fellow students or the instructor. Discover what you have done wrong, then go through frame 21 again, using another blank page for your response. Then go on to frame 23.

Example of Form of a Poem Following the Exercise in Frame 21

After you left
I boarded the jet
[ ]
I died three deaths
before the clouds were gone.
My scared seat jumped
to catch [ ]
and I could see
[ ]
[The trip was smooth]

It's like
a world with mirrors
and slanted floors
when you are gone
[ ]

23. Read through your poem as it now exists following frame 22. Try to think of it as a potentially new piece of work, one which is not necessarily connected with the former version of it. Ask yourself if its meaning has been altered in any way. Is it still about what it was formerly about or would it be wise to redefine what it is about? If the answer to this question is no, continue on to frame 24. If the answer is yes, decide what your poem is now about. State what it is about in as few words as possible and write it at the top of the most advanced version of your poem. Then go on to frame 24.

24. The continuity of your poem will have been destroyed by the loss of these parts removed in frame 22. You will have to restore its continuity by writing new parts to restore those removed. As you work, bear in mind why the parts were removed. Check back to your earlier draft (frame 15) to refresh your memory. As you write, try to make your new parts more appropriate to the whole of your poem than were the parts you removed. When you have finished go on to frame 25.

25. There should be many lines in your poem which are good in some ways, bad in others. Work back and forth between the copy of your poem in frame 15 and the most recent version of your poem (frame 22). Work line by line. Note what is wrong with each line in frame 15. Experiment with better ways of saying what you wanted to say, then enter your best version of each faulty line in the appropriate place as an annotation to your most recent version (frame 22). When you have gone through your entire poem, go on to frame 26.

26. You have not yet finished the final revision but, by this time, you will have begun to tire of it. You will have become blind to it in a way that will make it difficult to see it in a fresh, imaginative way. For the time being it will be a good idea to work on something else. Use your second poem and carry it through the processes outlined in frames 14 through 25. Use the workbook for your writing. When you have finished go on to frame 27.

27. If you wish to work on the other two poems you wrote, do so. When you have finished, go on to frame 28. If you do not intend to work on any more of the poems, go to frame 28 now.

28. Return to the most advanced version of your first choice poem (frame 22). By this time your poem will be sufficiently marked with annotations to make it difficult to read. Make a new copy of it in your workbook, a copy which includes the best revisions you have made to this point. Then go on to frame 29.

29. It has now been some time since you last worked on the revision of your first poem. You should be able to see it more clearly now, with a greater freshness than was possible at the time when you suspended revising it. Read through it now, as it appears in

your workbook, especially looking for faults you may have overlooked earlier. Also, be particularly aware of the changes you have made. It frequently happens that in the heat of revision a poet will make a change which seems, at the time, to be an improvement but which, during a later reading, reveals itself as not fitting the poem. If you find any of these lines, check back against the lines which it replaced. Often it will turn out that an earlier line was the best line after all. If no line seems quite appropriate, you will have to write a new one. Try a lot of different ways of doing the line until you find one you think is appropriate.

As you work your way through your poem ask yourself these questions (you will recognize them as being the same ones you have been asking all along but they remain important):

a. Do all the parts contribute to the poem?

b. Are all the parts consistent with what the poem is about?

c. Is the language of all parts of the poem pleasing (fun) to read and listen to?

d. Do all the ideas of the poem avoid being trite?

e. Does the poem present images?

f. Is the poem a continuous whole? Do all the parts fit easily together?

Whenever you find yourself answering no to one of these questions you should make an appropriate change in your poem. Revise your poem in frame 28 and then go on to frame 30.

30. Recopy your revised poem from frame 28 to this frame. If you have followed the instructions carefully to this point and worked as hard as you could at providing the requested responses, you have come close to exhausting what you can do on your own for your poem. It is time to subject your poem to the criticism of your classmates. Have several members of your class read your poem, comment on it and make suggestions about it. Whenever a suggestion or a comment is made which seems apt, make a note of it. Keep these notes on the poem page and those following. When you have all the comment you feel is worthwhile go on to frame 31.

NOTE:

There is a considerable and natural reluctance to accept criticism. The tendency is to react with the feeling of: "Who does he think he is, anyway!" But the value of criticism can be so great, particularly for student writers, that it is well worth the effort and considerable pain involved in accepting criticism with good spirit.

Criticism is a part of the learning process. You must become aware of where and how you have failed before you can increase the measure of your success.

Occasionally, when a fellow student dislikes one of your lines or groups of lines, he will suggest an alternative way of writing, complete to the least detail. Sometimes his suggested passage will seem so perfect that you will be unable to find a satisfactory alternative of your own. Should this happen, don't be afraid to utilize his suggestion. Though you run the risk of his being able to say, "I practically wrote the poem for him," you will learn much, providing you take the trouble to analyze why his lines are superior to your own.

Of course not all criticism is equally good. You will have to continually decide which criticism will be helpful, which of no value and which detrimental. As you continue through this book you will become better at making these judgments. It is, after all, a matter of experience. And in the end you will not trust the critics as much as you will your own judgment. But it will always be necessary to listen to a variety of critics.

31. Using the criticism you have recorded, revise the faulty lines in your poem by annotating the copy of it in frame 30. Then go on to frame 32.

32. Make a last, careful survey of your poem. Be certain you have corrected everything you wish to correct. When you have satisfied yourself that it represents the best work you can do, recopy it in a legible fashion. When you have finished, go on to frame 33.

33. The poem which you have copied onto frame 32 is a tentative final version. However, as you continue through this book you will gain greater skill at and insight into poetry writing. As you do so you will be better equipped to improve this one poem you have already written. You are encouraged to return to it from time to time, to read it over again. Whenever you feel you can revise it to advantage, do so. Never feel that anything you have written is necessarily finished. Come back to all your work periodically to see if you can make it better by carrying it through an additional revision.

When you have finished reading this frame, go on to frame 34.

34. Return to the revised version of your second poem in frame 26. Carry it through the processes outlined in frames 28 through 32. When you have finished go on to frame 35.

35. There are fourteen major steps in writing which you have followed. They are listed below. Go back and review them if necessary.

Step 1. Writing down the material for a poem (frames 1 and 9).

Step 2. Analyzing the material for poetic values (frames 2, 3, 4, 5).

Step 6. Writing a tentative sequence of events for a poem (frame 6).

Step 7. Writing a tentative poem (frame 7).

Step 8. Analyzing your tentative poem to decide what it is all about (frame 14), what parts are relevant (frame 15), what parts are interesting or fun or pleasing (frames 16, 17, 18), what parts are most original or best ideas--not trite (frame 19), what parts create images rather than just "tell" (frame 20).

Step 9. Revising the tentative poem to make it conform to the criteria in frames 14-20 and coming up with a new revision copy (frame 25).

Step 10. The first cooling off period in which you work on something else (frame 26).

Step 11. Second revision based on same criteria as in step 8 (frame 29).

Step 12. Getting comments and criticisms from others (frame 30).

Step 13. Revising on the basis of criticisms of others (frame 31).

Step 14. Making a clean copy of the poem (frame 32).

Roughly, the fourteen steps you have gone through fall into five major writing steps. They are:

(1) Choosing material (frames 1, 2, 3, 4, 5, 9).

(2) Writing a rough poem (frames 6, 7).

(3) Polishing the poem (frames 14-25).

(4) Obtaining comments and criticisms (frame 30).

(5) Revising on the basis of critical reaction (frame 31).

Look carefully at the five points listed and the fourteen points above. Go through them point by point, checking back to the text

to make certain you understand the steps involved in each. When you do not understand what is involved in a given step, check back to refresh your memory. When you feel you thoroughly understand what is involved in each of the points listed in this frame go on to frame 36.

36. Return to frame 9 and choose one of your responses from which you have not yet tried to write a poem. Copy it into your workbook. When you have finished, go on to frame 37.

37. You are going to write a new poem using the 14 steps outlined in frame 35. As you work refer back to the original frames only when you are stuck, unable to think of what to do next. Write from the response you have copied onto frame 36. Carry your poem to completion. When you have finished go on to frame 38.

38. Choose another chunk of material from frame 9. Write another poem following the instructions outlined in frame 35. As new ideas occur to you about how to write poetry make a note of them following the poem. When you have finished go on to frame 39.

39. You should now have many notes concerning what you have learned about your own poetry writing. Remember, you are in the process of developing a personal, highly individual way of approaching poetry writing. You want to develop the most effective one possible. Discuss what you have learned about your writing with other students. Find out what they have learned about their own writing. They may have discovered something which will be valuable to you. If your class is small enough to make it feasible, have your instructor open a discussion centering on what everyone has learned about poetry writing. Remember, however, it will not be possible, let alone desirable, to find some one best way of writing poetry applicable to all or even most of the students in your class. Each student will have to find his own way. Also, one can never feel secure that now he knows the best way to go at writing poetry. There is always something new to learn. Go on to the next section.

KINDS OF POETRY AND TECHNIQUES

Having completed all the work up to here, you should now have begun to gain a personal insight into poetry writing. You may, by this time, have written some very nice poems, or you may not, but at least you have begun to see what is involved in writing a poem and how you can best go about it. You have only started learning about poetry, however. You have barely crossed the threshhold into the vast world of poetry.

The exercises up to here showed you how to recognize potentially poetic material, how to approach it and how to begin manipulating it, moulding it into poetic form. It guided you toward understanding your

own relationship to the material, words and ideas, you must use in your writing.

The next section will deal with some specific forms of poetry and with special poetry writing techniques. It is not possible within the scope of this book to teach all the forms and techniques. There are simply too many of them. Rather, we will attempt to make you familiar with a few of them, show you how to use them and help you integrate them into your general view of poetry writing.

In the following sections you will find a great many more techniques and forms listed and briefly explained or defined. You may find it helpful to familiarize yourself with this list, either now or after you have completed this section of the program.

We urge you to read poetry on your own. It is only by reading a great many poems, by many different poets, that you will finally learn what it is you wish to write. Further, you can know all the techniques which have ever been employed, but it is only by seeing what others have done with them, how other poets have worked their magic with them, that you can hope to find original ways of using them yourself.

As in earlier sections you will be asked to write many pages of material as you work through the following segment of the program. It is only by writing, by employing what skill you have already developed and applying it to new problems that you will continue to learn. Though much writing is demanded by the program, it is only a minimum amount. Students who are truly interested in learning to write will benefit by doing much more than is required for completing the program. They should write endlessly on their own.

HAIKU AND TANKA

NOTE:

The haiku is an original form of poetry. It consists of three lines containing five, seven, and five syllables, respectively. Because of its extreme brevity it is a difficult form to use in English. It has, however, experienced a considerable vogue during recent years.

In the oriental languages the haiku is a very rich form. It has existed for several hundred years and through the period of its development a system of symbols has evolved, key words and images, each of which represents a wealth of ideas. Because of this oriental haiku are difficult to translate into English. When translated they seem to require much more space to communicate their meaning. The reason for this is that no corresponding system of symbols exists in English.

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Of course the English language and the Western culture are both rich in symbolic value, but the symbolism has not been so rigidly formalized. In English the poet cannot be so absolutely certain of his symbols as can, say, the Japanese poet writing a haiku. Most of our symbols can be interpreted in many ways while for each of the traditional oriental haiku symbols there is only one correct interpretation. This also makes it more difficult to write original haiku in English. Because haiku are so short they are compelled to use symbolic values if they are to communicate at all.

It is because of the difficulty of writing them that haiku are a good training exercise. In the attempt to write haiku the student will be forced to examine the language for its most poignant modes of expression. If he is to write a successful haiku he will have to make every word count toward the total effect of the poem. There is no room for extraneous words or ideas.

(Traditionally, haiku deals with scenes of nature. No mention of mankind is allowed, nor any allusion of human impact on nature. Senyu is a form identical to haiku in every respect except that it deals with people, never with nature. For our purposes we will disregard this distinction, considering, as is often done among poets writing in English, that both forms can be considered valid haiku.)

40. Read through these haiku several times until you feel familiar with the form. Remember there are three lines in each. The first and last lines contain five syllables, the middle line contains seven. Pay particular attention to the use of punctuation. Since the haiku allows so few words, the imaginative use of punctuation can be a great help in communicating. When you have finished, go on to frame 41.

Each fugitive wave
Flings free, sprawls, sighs--is sucked back
to a restless grave.

Winged with fragile steel,
bright patterns, clothed in motion,
reinforce the air.

O beautiful blue
Dawn! Now I hear men crying
Under a strange sky.

Raketeeth uncluster
lackluster autumn leaves...and
monopoly hills!

Even flowers die--
the child wandering can hear
how the garden cries.

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41. Return to your free written material from frame 9, the poems from frames 37 and 38, or your other poems, and select three bits which seem most likely to yield values usable in the haiku form. Don't hesitate to use one or more of the responses you used for your earlier writing if they should seem most appropriate. See if you can write a haiku from each of the three responses. Use one page for each poem. Experiment. Try different ideas with each response. Make several tentative drafts of each. When you have finished go on to frame 42.

42. Now go through what you have written. Think about the poems you have written from each bit of material. Make a notation of what you think each poem is about and which tentative draft from each bit of material is the best effort. Then go on to frame 43.

43. Now discuss your haiku with other members of your class. Find what other students think

    a. your haiku are about,

    b. are your best haiku,

    c. are your best uses of language and ideas,

    d. are your most effective uses of punctuation.

    Record what other students think about your haiku, then go on to frame 44.

44. Compare what you wrote about your haiku in frame 42 with what other students thought about them in frame 43. Did the other students all agree with you? Probably many of them did not. In what ways did they disagree? Why? Were they right or were you? By comparing your ideas with the ideas of other students you should be able to re-evaluate your haiku. Which ones now seem best? Why? What are they about? Choose your best haiku. Answer the following questions about it. Then go to frame 45.

    a. Does the poem fit perfectly into the haiku form?

    b. Which words, groups of words or lines are most pleasing to read and say?

    c. Which least pleasing?

    d. Is the punctuation effective?

    e. Can it be made more effective?

    f. Does the poem present images?

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g. Are there trite words or phrases which need to be revised?

h. Is the poem cohesive, all its parts seeming to fit the whole?

i. Is the meaning clear?

45. Bearing in mind the questions in frame 44, revise your haiku. Then go on to frame 46.

46. Using your other two haiku repeat frames 44 and 45. Then go on to frame 47.

47. Choose some idea or passage from your earlier writing which will serve as the basis of a haiku. Using this material repeat frames 41 through 45. Then go on to frame 48.

48. Repeat frame 47 using new material. Then go on to frame 49.

49. Do one more haiku from your free writing material following the directions in frame 47. Then go on to frame 50.

50. The three poems in this frame are examples of a form called Tanka. They might be considered a kind of extended haiku. Notice that each contains 5 lines. The first three lines are made up of 5, 7 and 5 syllables. They are in the form of a haiku while the final 2 lines have 7 syllables each. Read through these three examples until you develop a feeling for how they work. Then go on to frame 51.

Every single thing
Changes and is changing
Always in this world.
Yet with the same light
The moon goes on shining.

An old doll-maker
Wanders the dust-silent rooms
Searching among them
For painted dolls, for finding
Only cracked wooden faces.

When the sun is mine,
I will tie it to a kite
String, listen to its
Singing, feel the white rays and
Blue wings flutter to the sky.

51. Return to your free writing responses and select three which seem likely to yield values similar to the Tanka form. On the following pages write a Tanka from each response. Make several tentative

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drafts of each. If you would prefer you may substitute for one or more responses the haiku you have written, expanding them into tanka. If you do this use the final revisions of your haiku. When you have finished go on to frame 52.

52. Now go through what you have written. Make notations of what you think each poem is about and which tentative draft of each is the best effort. Then go on to frame 53.

53. Now discuss your tanka with other members of your class. Find what other students think

a. your tanka are about,

b. are your best tanka,

c. are your best uses of language and idea,

d. are your most effective uses of punctuation.

Use the remainder of your page to note what other students think about your tanka, then go on to frame 54.

54. Compare what you wrote about your tanka in frame 52 with what other students thought about them in frame 53. In view of any differences of opinion between yourself and the other students, re-evaluate your tanka. Which ones now seem best? Why? What are they about? Choose your best effort from frame 51. Answer the following questions about it. Then go on to frame 55.

a. Does the poem fit perfectly into the tanka form?

b. Which words, groups of words or lines are most pleasing to read and say?

c. Which are least pleasing?

d. Is the punctuation effective?

e. Can it be made more effective?

f. Does the poem present images?

g. Are there trite words or phrases which need to be revised?

h. Is the poem connected, are its parts coming to fit the whole?

i. Is the meaning clear?

55. Bearing in mind the questions you have answered in frame 54, revise your tanka, then go on to frame 56.

56. Using the versions of your other two tanka in frame 51 repeat frames 54 and 55. Then go on to frame 57.

57. Choose some idea or passage from your other material which will serve as the basis of a tanka. Using this material repeat frames 51 through 55. If you wish to expand your haiku into tanka rather than working with new material you may. Then go on to frame 58.

58. Repeat frame 57 using new material from your writing. Then go on to frame 59.

59. Do one more tanka from your other material following the directions in frame 57. Then go on to frame 60.

60. Think about your experience in writing haiku and tanka. What seem to be the difficulties and the virtues of each form? Why do you like or dislike each form? What have you learned about writing poetry from writing these two forms? Use the remainder of your workbook page to write any thoughts you have about haiku, tanka and poetry in general which have come to mind. Then go on to frame 61.

61. Discuss with other members of your class what you and they have learned about poetry from writing tanka and haiku. Record any valuable ideas you run across. Then go on to frame 62.

62. Try some living poetry:

    a. Choose a partner you think you can work with.

    b. Get a stack of six 3" x 5" cards. On each card write the first line of one of the haiku you wrote above.

    c. Put the stack of cards face down in front of you. The object of the game is to compose haiku. They don't have to rhyme. The only requirements are that the first line have 5 syllables, the second line 7 syllables and the third line 5 syllables, and that they go together to express some thought or feeling or action.

    d. Example:

        Suppose I picked a card which began:
        (5 syllables) the room is warmer.
        You would respond by making up a line of your own:
        (7 syllables) not for the turn of a knob.
        And I would conclude by making up the final line:
        (5 syllables) but the watching eyes.

        We would have composed the following haiku:

        the room is warmer
        not for the turn of a knob
        but the watching eyes.

e. Make up poems from the first lines on each of your cards. When you have finished make up six more poems from the lines on your partner's cards.

f. If you wish, you can take turns making up new first lines on the spot, after you have gone through the twelve cards.

g. Use your workbook to keep a record of all the poems you and your partner write in this manner. When you have finished go on to frame 63.

63. With a new partner repeat frame 62, but this time substitute tanka for haiku. Use the first lines from your six tanka in your workbook. Use your workbook to write the 12 tanka, six from your first lines and six from your partner's first lines. When you have finished go on to the next section.

ALLITERATION, ASSONANCE, CONSONANCE AND ONOMATOPOEIA

64. Sometimes a line of poetry can be made more musical by repeating a single sound in two or more words. When the sound repeated is the initial consonant of syllables or words it is called alliteration. In the following lines, from Dylan Thomas' poem "Lament," there is alliteration in the repetition of 'b' sounds.

When I was a windy boy and a bit

Compare it with the following line which says the same thing in a different way.

When I was a little more than a windy boy.

In the following poem the alliteration has been indicated by underlining the alliterative consonants. Read through it several times until you get a feeling for the alliteration.

She wondered if her heart were broken.
There were no lilacs in the garden
and the plum tree had not flowered.
In the moonlight the birch was pale
and around her she pulled her lavender coat
with her white hands trembling.

One of the obvious things about alliteration is that it can hardly be avoided. Alliteration occurs naturally in the language and much

effort would be required to completely purge it from any extended piece of writing.

Go back now and look through the most advanced revisions of your poems. Pick the one which seems most laden with alliteration and copy it into your workbook. When you have finished go on to frame 65.

65. Go through the poem you have copied in frame 64 and indicate the alliteration by underlining the alliterative consonants. Then go on to frame 66.

66. In order to insure that you have indicated all the alliteration, have other students read through your poem to see if they can find anything you may have overlooked. Indicate any additional alliteration which may be found, then go on to frame 67.

67. The alliteration in your poem will fall under three categories. They are:

    a. Alliteration which is neutral, that is, which has little or no impact on either the ear or the eye and neither benefits nor detracts from your poem.

    b. Alliteration which is offensive, is too obvious and contrived, exists for its own sake without adding to the impact, compactness or musical quality of the poem. (As it is possible to think or talk tritely, it is also possible to alliterate tritely.)

    c. Alliteration which is beneficial, which accents and intensifies the meaning and beauty of the poem, seeming to come naturally, in an uncontrived manner from the fabric and logic of the writing.

    Read through your poem again. Draw a thin line through the passages which seem offensively alliterated. Underline what seem to be the beneficially alliterated passages. When you have finished go on to frame 68.

68. Like any other aspect of the writing craft, alliteration is justified only insofar as it contributes to a better piece of writing. A poem is not necessarily better because it is alliterated. Alliteration, properly used, can contribute to the overall impact of a poem. Used clumsily or improperly it can destroy an otherwise successful piece of work.

    As you confront the problem of manipulating the alliterative qualities of your poem, keep in mind the following points:

    a. Alliteration can enhance the musical quality of a poem.

b. Alliteration can accentuate the relationship between ideas or images by repeating sounds at points which will echo the preceding idea or image.

c. Alliteration can, by modifying the structure of the writing, make the sound of a poem echo the ideas or images it elicits.

d. Alliteration can set parts of a poem in relief from the larger body of the piece by giving them stronger, more compelling sounds.

e. The most effective uses of alliteration will encompass many or all of these points at once.

Go through your poem again. Re-examine the alliterative passages you indicated were beneficial by underlining. Decide what the function of the alliteration is in each instance and make a notation of it. Now do the same thing for the passages you marked as detrimental by drawing a line through them. Circle any passages in which the alliteration cannot be justified by showing that it functions toward some end. When you have finished, go on to frame 69.

69. Now have other students read your poem. See if they agree with your ideas about its alliteration. Whenever someone disagrees on what seems to be valid grounds make a note of it. When you have finished go on to frame 70.

70. You will now have:

a. pleasantly alliterated lines which contribute to the poem,

b. pleasantly alliterated lines which do not contribute to the poem,

c. offensive alliteration which seems to have a purpose, even though the purpose is not realized,

d. offensive alliteration which seems to have no purpose,

e. and alliteration which seems to be neutral.

Revise your poem. Retain the pleasantly alliterated passages which contribute to the poem. Eliminate the alliteration in those passages where it does not contribute, either pleasantly or offensively. Those lines in which it contributes but offensively should be revised in such a way as to render them pleasant while retaining the function of the alliteration. Experiment with ways of revising the questionable lines. Try a lot of different things. When you have finished go on to frame 71.

71. There is a possibility that in the process of revision those alliterations which seemed neutral in the earlier version will have become meaningful, either beneficially or detrimentally, in their relationship to the newly revised passages. Think of your poem as a new piece of work, one not yet subjected to criticism, and re-examine it. Re-subject it to the processes in frames 67, 68, 69 and 70. Then go on to frame 72.

72. Make a clean copy of your poem. Then go on to frame 73.

73. Now pick from among the most advanced versions of your tanka the one which seems to have the most alliteration. Copy it onto the page following that one. Then carry it through the steps outlined in frames 65 through 72. As you revise do not lose the tanka form. When you have finished go on to frame 74.

74. Consonance is the repetition of the vowel and consonantal sounds following the accented vowel of the first word in a subsequent word or words but where the accented vowel of the first word is different than the accented vowel of the second word. The following words demonstrate consonance:

worry--hurry

cluttered--smattered

winter--center

The following words do not demonstrate consonance because their accented vowels are identical:

ages--cages

sallow--shallow

mother--brother

Assonance is the repetition of the final accented vowel sound of a word in a word or words following it but in which the subsequent consonants of the first differ from the ones in the following word. The following words demonstrate assonance:

sham--hang

aim--fade

roam--float

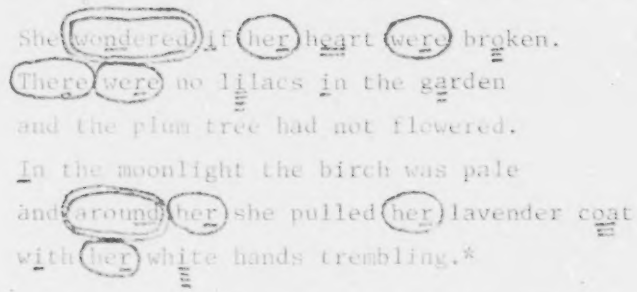
The following words do not demonstrate assonance because their consonants are identical:

shame--blame

aim--claim

roam--loam

In the following poem the assonance has been indicated by underlining and the consonance by circling the words in which it occurs:


She wondered if her heart were broken.
There were no lilacs in the garden
and the plum tree had not flowered.
In the moonlight the birch was pale
and around her she pulled her lavender coat
with her white hands trembling.*

Read through this poem until you can begin to feel the assonance and consonance in it. Think about how it works within the poem. When you have finished go on to frame 75.

75. Make a list of ten pairs of words which illustrate consonance and ten pairs which illustrate assonance. When you have finished, go on to frame 76.

76. Check your two lists of words against the definitions given in frame 74. Discuss your lists with other students. Be certain you understand what assonance and consonance are, what they look like and how they work. Then go on to frame 77.

77. Return to your poem in frame 72. Identify any instances of either assonance or consonance in the poem. Underline the assonance and circle the consonance. Then go on to frame 78.

78. Repeat the directions in frame 77, but this time use the version of your tanka in frame 73. When you have finished go on to frame 79.

79. Have other students read the two poems you worked on in frames 77 and 78. Do they agree that you have properly indicated the assonance and consonance? Can they find any instances of either you have overlooked. Make any necessary changes and then go on to frame 80.

80. Now read through those two poems again. Listen to how the assonance and consonance works within them. Does it add or detract from your poems? Try revising both poems to make the assonance and consonance more effective. Its functions are similar to those of alliteration, that is, to enhance the musical quality of your poem (make it sing) and strengthen relationships or help set certain parts into relief. When you have finished, go on to frame 81.

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* Her and were are examples of rhyme except in their relationship to there, when they become examples of consonance.

81. On the next two pages in your workbook write a new poem. Use any form you wish of five lines or more. You may derive your material from your subjective response material, or any place else. Make a special effort to utilize what you have learned about alliteration, assonance, and consonance. Carry the poem through several drafts until you have made it as good as possible, then go on to frame 82.

82. Onomatopoeia is the use of sounds to symbolize the idea or image presented by the poem or the coining of words to echo the sound of a thing presented in a poem. For instance, the line, "clip-clap, clip-clap, clip-clapping along," represents the sound of a horse's hooves. It is an onomatopoeiac representation of a horse. However, the use of this technique is seldom so obvious as this line would indicate. Read through the following poem. The obviously onomatopoeiac lines have been indicated by underlining them:

The unicorn wind
pirouettes
against the night
and brown leaves
swirl from the walks.

I see you running
in the dark
with your voice
trailing like hounds
baying the moon
and your mad skirts
flailing about you.

At my windows
you have hung
bright satin
and with long strokes
you paint ballerinas
turning
on my walls.

In the second line the word "pirouettes" sounds like the action it describes. It is an onomatopoeiac word. Say it aloud and feel how rapidly it moves from syllable to syllable. "Baying," in line 10, is another onomatopoeiac word. Say it aloud and again, feel how nearly it resembles the action it describes. "Leaves swirl," in lines 4 and 5 echo the rustling sound of dry, autumn leaves scuttling in the wind.

Because of the long vowels in "long strokes," line 16, the two words cannot be said quickly. Thus, they echo the sense of the line. Compare them with "bright satin" in the preceding line. Those words

must be said much more quickly. In lines 17 and 18 the words, "ballerinas turning" themselves turn through their syllables, though now slowly as compared with "pirouettes" in the second line.

Many of the other lines and words in the poem are faintly onomatopoeiac. The ones underlined are only the most obvious. Read through the poem until you can feel how the sound of the words reinforces the poem's ideas and images. Discuss it with other students. Then go on to frame 83.

83. Writers sometimes talk of words as having color. Frequently they are referring to the onomatopoeiac quality of words. There is a tendency for high tones to suggest light and low tones darkness, for instance. Thus the words "white" and "black" each suggest the phenomena they describe. Other words, such as "pirouette" and "baying" seem to attempt to mirror the actions they describe. Write as many onomatopoeiac words as you can think of. Discuss the problem with other students. See what words they can think of. For each word in your list write why you think the word is onomatopoeiac. When you have finished go on to frame 84.

84. Turn back to the most advanced version of the poem you wrote in frame 81. Examine it for onomatopoeiac qualities. Many should be suggested by the writing. This is likely because of the effort you expended enhancing the alliteration, assonance and consonance of the poem. It should be rich in sound. Underline any words or lines which seem particularly onomatopoeiac. Then discuss the poem with other students. Mark any you can find through discussion. Then go on to frame 85.

85. Now revise your poem. Think about how onomatopoeia can enhance it. In those parts where it seems beneficial to the poem, attempt to improve the onomatopoeia. Experiment. When the old copy of your poem becomes too cluttered with annotation recopy it. When you have done all you can go on to frame 86.

86. In this section you have experimented with the use of alliteration, assonance, consonance and onomatopoeia. Return now to earlier sections and choose more material from which you can write a poem. Write a poem of ten or more lines long in order to give you sufficient room to experiment with the techniques you have learned. Concentrate especially on using alliteration, assonance, consonance and onomatopoeia but also make an effort to utilize all you have learned in the preceding chapters. Review if necessary to refresh your memory of the material we have covered thus far. Write the best poem you can, then go on to frame 87.

87. Repeat frame 86 using other material from your earlier writing. When you have finished go on to the next section.

METAPHOR AND SIMILE

88. A metaphor is a relationship between two words, ideas or images which shows a significant similarity between them, thus changing our understanding of either or both. A metaphor is in two parts. The first, which carries the weight of the comparison, is called the vehicle. The second, the subject to which the first refers, is called the tenor. The following are examples of very simple metaphors:

a. Hello is a fire engine.

b. She is a city.

c. Clouds of spun linen.

d. The phosphorescent waves were fire curling in the dark.

e. His broken heart is an emptiness devoid of light.

f. Miraculous flight, this high winging bird of contemplation.

In the final example there is a complex metaphor. A metaphor becomes complex when the vehicle of the first metaphor becomes the tenor of a second. The nature of this line can more readily be seen if it is rearranged thusly: "The high winging bird of contemplation is miraculous flight."

"High winging bird" is the vehicle of the first metaphor, "contemplation" the tenor. "Miraculous flight" is the vehicle and "high winging bird" the tenor of the second metaphor. Think of the line as representing these two statements:

a Contemplation is a high winging bird

b. A high winging bird is miraculous flight

In the following poem the metaphors have been indicated by underlining them. Read through the poem until you get a feeling for how they function within the poem.

The unicorn wind
pirouettes
against the night
and brown leaves
swirl from the walks.

I see you running
in the dark
with your voice
trailing like hounds
baying the moon
and your mad skirts
flailing about you.

At my windows
you have hung
bright satin
and with long strokes
you paint ballerinas
turning
on my walls.

It is frequently useful to rearrange lines or sentences when analyzing the metaphors they contain. In lines 1 and 2 the metaphor is more easily seen if the idea is stated in this way: "The wind is a pirouetting unicorn." "Pirouetting unicorn" is the vehicle and "wind" is the tenor.

The metaphor in lines 11 and 12 is more easily seen if the line is paraphrased in this manner: "Flailing skirts are mad" (a kind of insanity).

The metaphor in line 15 is incomplete. Only the vehicle is supplied by the poet. The reader must supply the tenor. Paraphrased, with the missing tenor restored, the metaphor is: "Night is bright satin at the windows."

When you feel you understand the material in frame 88 go on to frame 89.

89. Try making up some metaphors of your own. Remember, there are two parts to every metaphor, the vehicle and the tenor. Mechanically, any two ideas or images can be made into a metaphor. The usefulness of any such metaphor will depend upon the degree of similarity which actually exists between the vehicle and the tenor.

Here is a trick to help you write metaphor. Write in your workbook a sample like the one below, but using your own material.

List words (nouns) from your poems.	Write a descriptive word for your column #1 word for each quality listed.		List another thing or object which could also be described by the quality in the middle column.
sheep	(color)	white	wolf
war	(taste)	bitter	bark
war	(sound)	raucous	rock music
face	(action)	twisted	cyprus
truth	(age)	old	loaves and fish
man	(soberness)	drunk	new-born calf
damp night	(feeling)	punishing	mother
fist	(action)	clenched	face

Not all the metaphors above will be poetic, but some will be fair. Thus, the following metaphors come from the list.

His face was a clenched fist.
He was a wobbly calf.
His face was a cyprus.

90. Sometimes after writing a metaphor it must have context to "make it happen" or "make it work," or "make it believable," or "help the reader to see the comparison intended." The three examples below show how the context can make the metaphor happen. Study them and then rewrite your metaphors from frame 89 by adding context to make them happen. Then go to frame 91.

His face was a clenched fist
Dying on a round pain

His walk was a new-born calf
With a careless choreography

His cyprus face
Twisted a smile

91. Read through the metaphors you have written. Discuss them with other members of your class. Be certain you have done them correctly, that you understand what a metaphor is. Then go on to frame 92.

92. The language abounds with what are called dead metaphors. These are words and phrases which have become so widely used that they are no longer generally recognized as being metaphorical. Some examples are:

nightfall
eye of a hurricane
deathly quiet
snow white

There is a certain danger in the dead metaphor. The over abundant use which has blunted our sensitivity to its metaphorical nature has also almost always rendered it trite or cliche. The dead metaphor is one of the most abundant sources of cliche and trite constructions. See how many of these dead metaphors you can bring to mind. Write them on your page. Then go on to frame 93.

93. In actual use metaphors seldom occur as directly as in the usual examples. Note the variations of the metaphors below:

His nose is a stoplight

His nose, a stoplight
His stoplight nose
The stoplight startled me
His nose like a stoplight (this is a simile).

Her face is a cyprus

Her face, a cyprus
Her cyprus face
Her twisted cyprus face
The cyprus stared at me

Or again note how, in a poem, the metaphor can come to life, or happen.

Twisted cyprus face
Clenched like a fist with no pain
Yet you must feel it.

Now go back over your own metaphors or write some new ones and experiment with the different forms illustrated above and work some into short poems. When you finish go to frame 94.

94. Simile is very similar to metaphor. It differs in that the tenor and the vehicle are identified and their relationship made obvious by the use of the words "like" or "as." Some similes are:

a. white as snow
b. clean as a cloud
c. lips like rubies
d. men as big as mountains
e. soldiers as hard as iron

The simile is not as potentially rich in meaning or impact as the metaphor because the relationship of the vehicle and tenor are always limited by the definition implied by the words "like" and "as." "Men as big as mountains" is not as potentially rich a statement as is "mountainous men." The simile only refers to the size of the men while the later statement, a metaphor, may yield innumerable values depending upon the context within which it was used. Craggy features, for instance, might be a logical extension of the metaphor.

Go through the metaphors you have written so far and convert them to similies by rewriting them and inserting "like" or "as" in the appropriate places. Then go on to frame 95.

95. Write at least ten new similies. Make up more than ten if you can think of them, then go on to frame 96.

96. Convert the similes you wrote in frame 95 to metaphors. If you have difficulty read back through the preceding frames. If necessary, discuss the conversion process with other students. When you have finished go on to frame 97.

97. From among your earlier poems or free writing in frame 9 choose some material which suggests some metaphorical ideas. Use it as the basis for writing a poem. Structure the poem with metaphor and simile. Make the poem ten lines or more long. Extend your metaphor. In the early drafts push the metaphor extension as far as you can to "make it happen." When you have finished go to frame 98.

98. A mixed metaphor is one in which the similarity between the vehicle and the tenor is so minor or even false that the metaphor is not believable. In literature there are few taboos as great as the one against the mixed metaphor. You must be certain that any and all metaphors in your poem deal with similarities sufficiently strong to render them meaningful. This is largely a matter of judgment. Don't entirely trust yourself. Discuss your poem with other members of your class. Whenever you can identify a questionable use of metaphor or simile underline it. When you have finished go on to frame 99.

99. There are two ways of handling a mixed metaphor. You can edit it out of your poem or you can rewrite it. A reasonable first assumption is that you intended saying something even though you failed by falling into the mixed metaphor trap. The first step in approaching a mixed metaphor should be to rethink and rewrite it, attempting to make it work within the context of the poem. Only when this fails should the metaphor be discarded. However, editing out a large chunk of your poem will likely destroy the sense of it. If you must remove a metaphor you will have to heal the wound left in its place.

    Begin by attempting to rewrite the mixed or marginally mixed metaphors in your poem. When you find it impossible to rectify a faulty metaphor and only then, remove the metaphor. Restore the sense of your poem by using either a new metaphor or filling the hole with lines of a non-metaphorical nature. Do this revising by annotating the most advanced version of the poem you have in frame 97. When you have finished go on to frame 100.

100. Make a clean copy of your poem. When you have finished go on to frame 101.

101. Even though you are now concentrating primarily on metaphor and simile, it is essential that you not fail to apply the other things you have learned about poetry writing. Revise your poem paying attention to alliteration, assonance, consonance and onomatopoeia, to the intensity of expression you learned in writing haiku and tanka and

the substantive questions with which you dealt earlier. Review the previous chapters and sections if your memory needs refreshing. When you have finished go on to frame 102.

102. During the process of your most recent revision you may have done damage to your metaphors and similes. It must be remembered that within the tiny, closed system of a poem any change will inevitably have its effect on the rest of the poem. Inspect the poem closely. Restore any damage which has been done. Have a last hand at improving all the parts and aspects of your poem. Recopy the poem, then go to frame 103.

103. Now have other students read and comment on your poem. Do they like it? Do they think it works? Make a notation of points at which they think it fails. Consider these points. Wherever you think they may be correct in their criticism try revising to improve your poem. Make a clean copy of your poem on the page and revise. When you have finished go on to frame 104.

104. Choose another sample of your material and use it as the basis for repeating frames 97 through 103. When you have finished go on to the next section.

RHYME, METER AND STANZA FORM

NOTE: Assonance, consonance and alliteration are considered forms of rhyme. In the present section we will confine ourselves to the more traditional forms of rhyme.

105. Correct rhyme is the repetition of the sounds in the accented vowels of words and all the consonantal and vowel sounds following and in which the sounds produced by the consonants immediately preceding the accented vowels are different. Thus, the following are examples of rhyme:

breasted	chested
eating	feasting
spellbinder	stem-winder
viola	zola
lollard	pollard
attainable	constrainable

The following are not rhymes because the consonants preceding the accented vowel are identical. They are known as identities. Whenever there is a question as to which is the accented vowel the dictionary should be consulted:

bay	obey
ability	probability

The following are not rhymes because not all of the consonantal and vowel sounds following the accented vowel are similar:

castaway	railway
silver	deliver

Words may rhyme correctly without being spelled alike. Rhyme depends upon sound, not sight. Therefore, the following words rhyme:

date	freight
go	though

Words which are spelled alike but which do not sound the same are not correct rhyme. They are sometimes used in English verse, however, and are called eye rhymes. They are actually a form of consonance. The following are examples of eye rhyme:

cough	through
finger	singer

Read through the material in this frame until you believe you understand it, then try your hand at writing rhymed couplets. A couplet is two lines of poetry. Use only correct rhymes. The following is an example of a rhymed couplet:

The sleeping Tar would snore
And cough upon the wide sea shore.

When you have finished go on to frame 106.

NOTE:

Students who find they enjoy working with rhyme will find a rhyming dictionary an invaluable tool, particularly during the period while they are beginning to learn about rhyme. Most dictionaries will contain much technical information about the use of rhyme and versification as well as presenting for easy reference most of the rhymes of the language.

106. Now, try putting three or more rhymed couplets together in such a way that the sense of the writing proceeds from one to the next forming a single poem. Use the couplets you wrote on the preceding page or make up new ones. Write three poems of three or more rhymed couplets each. Then go on to frame 107.

107. The sounds rhyming with a preceding word need not all come from the same word. These are examples of correct rhyme:

bichloride	sore eyed
Quentin	went in

See if you can find rhymes of this sort. Use them in couplets. When you have finished go on to frame 108.

108. When the rhyme occurs at the conclusion of a line, as in the couplets you have been writing, it is known as an end rhyme. Rhymes can also occur within a line. When they do this they are known as internal rhymes. The following are examples of internal rhyme:

He did abhor, he hated war

And then a knocking lightly at the door,
The bolt unlocking more slowly than before.

The first line represents the most simple form of internal rhyme in which both rhyming words occur in the same line, one at the end of it and one preceding it. The second example shows a more complex form in which both lines of the couplet are end rhymed and the internal rhymes occur in consecutive lines.

In diagraming a rhyme scheme it is customary to represent each rhyme sound by a letter of the alphabet using A to represent the first rhyme which occurs, B for the second, C for the third and so forth. Every time a rhyme recurs it is designated by the letter first used to identify it. Thus, the two above examples would be diagramed in this manner:

First example:	A	A
Second example:	A	B
	A	B

There are several ways in which internal rhymes might be arranged. The following diagrams suggest some of these rhyme schemes:

1.	A	B
	B	A
2	A	A
	B	A
	B	B
3.	A	B
	A	C
	C	B
	A	C

Experiment with using internal rhyme. Start with simple rhyme schemes and work toward more complicated ones. Make up schemes of your own when you have exhausted the ones shown here. When you have finished go on to frame 109.

109. There are different designations of rhyme according to the number of syllables they encompass. A one syllabled rhyme is called a masculine rhyme. The following are examples of masculine rhyme:

me	we
advance	ambulance

A two-syllabled rhyme is called a feminine rhyme:

ocean	devotion
after	rafter

Three-syllabled rhymes are called triple rhymes:

miracle	lyrical
saleable	mailable

Though rhymes of more syllables than three are possible, they are encountered infrequently. Rhymes of more than three syllables are designated by no particular term.

Go back through the rhymes you have written in this chapter. Decide which are masculine, feminine and triple. Consider the effectiveness of each kind of rhyme. Which kinds seem best suited for certain purposes? Do some rhymes tend to create solemnity while others create humorous effects? Are some rhymes too obvious, heavy sounding, for some purposes? Discuss rhyme with other members of your class. Find out what they have come to think about rhyme and how to use it. Make notes of what you think about the use of rhyme. When you have finished go on to frame 110.

110. All languages have a rhythm which is natural to them. This rhythm exists by virtue of the words and syllables within words which are stressed in normal speech. In diagraming the stresses of speech or the written word syllables are marked in two ways:

a. (′) designates a stressed syllable.

b. (⏑) designates an unstressed syllable.

The art of analyzing poetry for stress is called scansion. This is a scanned and marked line:

⏑ ′ ⏑ ′ ′ ⏑ ′ ⏑ ′
And all your beauty stand you in no stead

′ ⏑ ′ ⏑ ′ ′ ⏑ ⏑ ′ ′ ′ ⏑ ′ ⏑ ⏑ ′
Ordinary prose also has rhythm which can be scanned as has been done
⏑ ′ ′
to this line. One of the principle differences between poetry and prose is the regularity of the rhythm in poetry.

The comparatively regular rhythm in poetry is called meter. The metric foot is the unit within which meter occurs. Meter imposes

a regular recurrence of stresses which divides a line into equal divisions. This division can best be understood as a time span. The metric foot comprises one of these time spans. The line we scanned for stress divides into feet in this manner:

And all/ your beau/ ty stand/ you in/ no stead

The foot functions in poetry in much the same manner that the measure functions in music. There are several kinds of metric feet used in English verse. The five most frequently used are:

a. iamb ⏑ / the house/ that on/ the hill

b. anapest ⏑⏑/ and the heart/ of the earth

c. trochee /⏑ God be/stow your/ love on

d. dactyl /⏑⏑ af/ter my ig/nobleness

e. spondee // heart, stone/ fire, death

Experiment with writing each of these five kinds of lines. See if you can begin to get a feel for it. When you have finished go on to frame lll.

lll. Lines themselves are designated by the number of feet they contain. The lines used in English verse are:

a. monometer - one foot
and now/
I call/
I cry/
beseach/
my God/

b. Dimeter - two feet
The stars/ that stand
above/ the hill

c. Trimeter - three feet
In all/ his glory/ spun
the vil/lain out/ his web

d. Tetrameter - four feet
I have seen/ all the stars/ in this

e. Pentameter - five feet
The house/ that in/ the val/ley
stands/is gone.

f. Hexameter - six feet
God, hell/ earth; quick/ death; cry
grasps wrenched/ life stiff/ hot scream

Thus, a line of iambs five feet long would be known as iambic pentameter. One of four trochees would be known as trochaic tetrameter. All metered lines of English verse can be designated in this manner.

On the following pages are several poems. Scan them. Copy some of them into your workbook. Mark them into metric feet. Identify the predominant meter and foot in each. When you have finished go to frame 112.

(poems for scansion)

She had a horror he would die at night
and sometimes when the light began to fade
She could not keep from noticing how white
the birches looked--and then she would be afraid.
Even with a lamp, to go about the house
and lock the windows; and as night wore on
Toward morning, if a dog howled, or a mouse
squeaked in the floor, long after it was gone
Her flesh would sit awry on her. By day
She would forget somewhat, and it would seem
A silly thing to go with just this dream
and get a neighbor to come at night and stay.
But it would strike her sometimes, making the tea:
She had kept that kettle boiling all night long, for company.

Assault

I had forgotten how the frogs must sound
After a year of silence, else I think
I should not so have ventured forth alone
At dusk upon this unfrequented road.

I am waylaid by Beauty. Who will walk
Between me and the crying of the frogs?
Oh, savage beauty, suffer me to pass,
That am a timid woman, on her way
From one house to another!

MORNING AT THE WINDOW

They are rattling breakfast plates in basement kitchens.
And along the trampled edges of the street
I am aware of the damp souls of housemaids
Sprouting despondently at area gates.

The brown waves of fog toss up to me
Twisted faces from the bottom of the street,
And tear from a passer-by with muddy skirts
An aimless smile that hovers in the air
And vanishes along the level of the roofs.

HYSTERIA

As she laughed I was aware of becoming involved in her laughter and
being part of it, until her teeth were only accidental stars with a
talent for squad-drill. I was drawn in by short gasps, inhaled at each
momentary recover, lost finally in the dark caverns of her throat,
bruised by the ripple of unseen muscles. An elderly waitress with trem-
bling hands was hurriedly spreading a pink and white checked cloth
over the rusty green iron table, saying: "If the lady and gentleman
wish to take their tea in the garden, if the lady and gentleman wish
to take their tea in the garden..." I decided that if the shaking of
her breasts could be stopped, some of the fragments of the afternoon
might be collected, and I concentrated my attention with careful
subtlety to this end.

THE DEATH OF THE BALL TURRET GUNNER

From my mother's sleep I fell into the state,
And I hunched in its belly til my wet fur froze.
Six miles from earth, loosed from its dream of life,
I woke to black flack and the nightmare fighters.
When I died they washed me out of the turret with a hose.

THE METEORITE

Star, that looked so long among the stones
And picked from them, half iron and half dirt,
One; and bent and put it to her lips
And breathed upon it till at last it burned
Uncertainly, among the stars its sisters--
Breathe on me still, star, sister.

MUSHROOMS

Overnight, very
Whitely, discreetly,
very quietly

Our toes, our noses
Take hold on the loam,
Acquire the air.

Nobody sees us,
Stops us, betrays us;
The small gains make room.

Soft fists insist on
Heaving the needles,
the leafy bedding.

Even the paving.
Our hammers, our rams,
Earless and eyeless,

Perfectly voiceless,
Widen the crannies,
Shoulder through holes. We

Diet on water,
On crumbs of shadow,
Bland-mannered, asking

Little or nothing.
So many of us!
So many of us!

We are shelves, we are
Tables, we are meek,
We are edible,

Nudgers and shovers
In spite of ourselves.
Our kind multiplies:

We shall by morning
Inherit the earth
Our foot's in the door.

THE PRESSURES

(Love twists
the young man. Having seen it
only once. He expected it
to be, as the orange flower
leather of the poet's book.
He expected
less hurt, a lyric. And not
the slow effortless pain
as a new dripping sun pushes
up out of our river.)
And
having seen it, refuses
to inhale. "It was a
green mist, seemed
to lift and choke
the town."

A POEM FOR SPECULATIVE HIPSTERS

He had got, finally,
to the forest
of motives. There were no
owls, or hunters. No Connie Chatterleys
resting beautifully
on their backs, having casually
brought socialism
to England.
Only ideas,
and their opposites.
Like,
he was really
nowhere.

DO NOT GO GENTLE INTO THAT GOOD NIGHT

Do not go gentle into that good night,
Old age should born and rave at close of day;
Rage, rage against the dying of the light.

Though wise men at their end know dark is right,
Because their words had forked no lightning they
Do not go gentle into that good night.

Good men the last wave by, crying how bright
Their frail deeds might have danced in a green bay,
Rage, rage against the dying of the light.

Wild men who caught and sang the sun in flight,
And learn, too late, they grieved it on its way,
Do not go gentle into that good night.

Grave men, near death, who see with blinding sight
Blind eyes could blaze like meteors and be gay,
Rage, rage against the dying of the light.

And you, my father, there on the sad height,
Curse, bless, me now with your fierce tears, I pray.
Do not go gentle into that good night.
Rage, rage against the dying of the light.

112. Now discuss your scansion with other students. Be certain you have scanned and marked correctly. Whenever you find an error, make certain you understand the nature of your mistake. When you are certain you understand and can apply scansion go on to frame 113.

113. Now try your hand at writing the various kinds of metered lines. Do your writing in this order:

Three lines of

a. iambic dimeter (⏑ ′ / ⏑ ′)
b. iambic trimeter (⏑ ′ / ⏑ ′ / ⏑ ′)
c. iambic tetrameter (⏑ ′ / ⏑ ′ / ⏑ ′ / ⏑ ′)
d. iambic pentameter (⏑ ′ / ⏑ ′ / ⏑ ′ / ⏑ ′ / ⏑ ′)
e. anapestic dimeter etc.
f. anapestic trimeter
g. anapestic tetrameter
h. anapestic pentameter
i. trochaic dimeter
j. trochaic trimeter
k. trochaic tetrameter
l. trochaic pentameter

m. dactylic dimeter
n. dactylic trimeter
o. dactylic tetrameter
p. dactylic pentameter
q. spondaic dimeter
p. spondaic trimeter

When you have finished go on to frame 114.

114. Experiment with making short poems of some of the kinds of metered lines you have learned in frames 110 through 113. You needn't worry about rhyming at this point. Rhyme if you wish. If you prefer, don't rhyme. When you have finished go on to frame 115.

115. By now you have begun to evolve some ideas of your own about the various kinds of meter. You will have found some relatively easy to use, others awkward. Some meters will seem suited to one kind of poetic idea, others to another kind. Make notes about what you think of the various kinds of meters. Talk to your classmates. Find out what ideas they have. Whenever they have something which seems interesting or potentially valuable make a note of it here. When you have finished go on to frame 116.

116. Now go through the poems again, the ones you have just scanned. This time indicate the rhyme schemes and any uses of alliteration, assonance, consonance, or onomatopoeia and the uses of metaphor and simile. When you have finished go on to frame 117.

117. Do your previous ideas of how to use the various techniques correspond with the uses to which these writers have put them in the poems which you scanned and marked. Discuss with other members of your class how these poets have utilized the techniques you have studied. See if you can come up with any new ideas. Note any new ideas you come across in discussion. When you have finished go on to frame 118.

118. We have already used three basic forms of poetry: the haiku, tanka and couplet. Only the couplet, however, is one of the standard English forms. The haiku and the tanka are both oriental in origin.

In the remaining frames of this section we are going to study the use of several more basic, widely used English forms. The first form we will look at is the tercet.

A tercet (or triplet) is a group of three lines. A tercet may constitute only one stanza of a poem or it may be an entire poem itself (the haiku is a kind of tercet). The following is an example of a tercet:

I saw the waning moon,
I saw my life laid waste
too quickly, much too soon.

There are only a limited number of rhyme schemes possible in the tercet. Barring internal rhyme they would be AAA, ABA, ABB, and AAB. Try writing several tercets. Use at least two of the possible rhyme schemes. Write at least one tercet each in trimeter, tetrameter and pentameter. Your tendency will be to use iambics. This is the meter most natural in English. Make a point of writing at least one of your tercets in a meter other than iambic. When you have finished go on to frame 119.

119. The quatrain is a poem or stanza of four lines. It is in this form that the ballad is written. The following is a quatrain:

Gay the lights of Heaven showed,
And 'twas God who walked ahead;
Yet I went along the road,
Wanting my own house instead.

Notice that the rhyme scheme is A B A B. There are several traditional ways of rhyming a quatrain of which this is only one. Other rhyme schemes are A B C B; A A B B; A B B A; and A A B A. Many other rhyme schemes are possible and none are forbidden.

When several quatrains are used to form a single poem they may be rhymed independently (ABAB; CDCD; etc.) or the rhyme can be made to interlock the stanzas (ABCB; CDED; EFGF; etc.)

Any meter or number of feet per line is permissible in a quatrain. However, there are some standard, identifiable forms:

a. Ballad: 4, 3, 4 and 3 iambic feet per line.

b. In Memorium Stanza: 4 iambic feet per line.

c. Rubaiyat stanza: 5 iambic feet per line.

d. Short Meter (used in hymns): 3, 3, 4 and 3 iambic feet per line.

Try writing a poem made up of several quatrains. Choose a particular rhyme scheme, any one you wish, and maintain it through your poem. Likewise, use a consistent line length and meter. Make your poem at least three quatrains long. When you have finished go on to frame 120.

120. The sestet is a poem or stanza of six lines. The following is an example of a sestet.

Forceless upon our backs there fall
Infrequent flakes hexagonal,
Devised in many a curious style
To charm our safety for a while,
Where close to Earth like mice we go
Under the horizontal snow.

This particular sestet is rhymed as though it were three couplets. All the lines contain four iambic feet. It is permissible to use any rhyme and meter. Often, when writing stanzas of several lines it is helpful to think of them as being two or more shorter stanzas combined. For instance, a sestet could be written as a quatrain and couplet or as two tercets. On the remainder of your page and the one following it try writing a tercet. When you have finished go on to frame 121.

121. There are two accepted sonnet forms. They are known as the Shakespearean Sonnet and the Italian Sonnet. A sonnet proceeds through two parts. The first, of eight lines, is called the octave and the concluding section, six lines, the sestet. The lines are all iambic pentameter. The rhyme schemes are as follows:

	SHAKESPEAREAN	ITALIAN
Octave	A	A
	B	B
	A	B
	B	A
	C	A
	D	B
	C	B
	D	A
Sestet	E	C
	F	D
	E	E
	F	C
	G	D
	G	E

or

D
E
D
E
D
E

As can be readily seen, the rhyme scheme of the Shakespearean Sonnet follows the pattern of three quatrains and a couplet. The Italian rhyme scheme is that of two quatrains and two tercets.

In both cases the octave must be end stopped, that is, conclude with a period or semicolon. The octave introduces the theme of the poem and develops it in one direction. The sestet introduces a new development to the theme, carrying it in a different direction. In the Italian Sonnet the new theme is introduced by the first tercet and the second tercet brings it to a conclusion which resolves the poem.

In the Shakespearean Sonnet this new direction of the theme is carried by the final quatrain and resolved in the final couplet. It is sometimes helpful to think of a sonnet as explaining a problem (the octave), looking at the problem in a fresh way (first part of the sestet) and finding the solution (the final tercet or couplet).

The following poems are sonnets. The first is a Shakespearean Sonnet, the second an Italian Sonnet:

Believe, if ever the bridges of this town,
Whose towers are builded without fault or stain,
Be taken, and it battlements go down,
No mortal roof shall shelter me again;
I shall not prop a branch against a bough
To hide me from the whipping east or north,
Nor tease to flame a heap of sticks, who now
Am warmed by all the wonders of the earth.
Do you take ship into some happier shore
In such event, and have no thought for me.
I shall remain;--to share the ruinous floor
With roofs that once were seen far out at sea;
To cheer a mouldering army on the march...
And beg from spectres by a broken arch.

The world is too much with us; late and soon,
Getting and spending, we lay waste our powers:
Little we see in Nature that is ours;
We have given our hearts away, a sordid boon!
This sea that bares her bosom to the moon,
The winds that will be howling at all hours,
And are up-gathered now like sleeping flowers;
For this, for everything, we are out of tune;
It moves us not.--Great God! I'd rather be
A Pagan suckled in a creed outworn;
So might I, standing on this pleasant lea,
Have glimpses that would make me less forlorn;
Have sight of Proteus rising from the sea;
Or hear old Triton blow his wreathed horn.

Try writing a sonnet. Adhere to the sonnet form, either Italian or Shakespearean. When you have finished go on to frame 122.

122. Think about stanza forms. What have you learned from your experience with using them? Are some stanza forms more versatile than others? Are some well suited for certain purposes but not for others? Discuss stanza forms with other members of your class. Write what you

and others have learned about the use of traditional stanza forms. Think about what happens to the idea or theme of a poem as it progresses from one stanza to another. What happens if the stanzas are rhymed separately? What if the rhyme interlocks the stanzas? In what respect does an idea or theme change when it is taken from a long stanza and expressed in several short ones? When you have finished go to the next section.

TECHNIQUE AND THE IMAGINATION

123. The material and exercises in an earlier section of this program were concerned with the process of finding and manipulating poetic ideas. In this section we will work through a series of exercises designed to help the student incorporate the various technical aspects of poetry into his general writing approach.

Return to frame 9 and pick one of the subjective responses you have not yet used. Copy it in your workbook. Then go to frame 124.

124. Consider your subjective response carefully. You are going to write a rhymed poem of 14 or more lines. It is important that you have some idea of what you attempt to do. Start by jotting some tentative stanza and rhyme schemes. Do this in the manner of the following examples:

Scheme 1	Scheme 2	Scheme 3
1 - A	1 - A	1 - A
2 - B	2 - B	2 - B
3 - A	3 - C	3 - A
4 - C	4 - A	4 - B
5 - B	5 - B	5 - C
6 - C	6 - C	6 - D
7 - D	7 - D	7 - C
8 - B	8 - E	8 - D
9 - C	9 - F	9 - E
10 - D	10 - D	10 - F
11 - A	11 - E	11 - E
12 - D	12 - F	12 - F
13 - A	13 - G	13 - G
14 - D	14 - G	14 - H
		15 - G
		16 - H

You will note that in scheme 1 there are two quatrains and a sestet. Scheme 2 has two sestets and a couplet, scheme 3 has four quatrains. As you devise your schemes think in terms of their units. Write the poem and then go to frame 125.

125. Now write an expanded version of some of the material you picked up from frame 9. Organize it into a kind of story line, something starting, proceeding through some kind of complication, and concluding. Then go to frame 126.

126. Reconsider the tentative rhyme and stanza schemes you have written in frame 124. Do this by entering one properly rhymed word following each line designation as has been done in the following example. Use words of the same number of syllables to give a regular, metered pattern of recurrence:

1 - A gloat
2 - B bag
3 - C fun
4 - A coat
5 - B brag
6 - C done

7 - D fives
8 - E click
9 - F craft
10 - D knives
11 - E flick
12 - F draft

13 - G hot
14 - G trot

Do this for all the schemes you have written in frame 124. Then go to frame 127.

127. Read through the word (sound) patterns of each scheme. Read from top to bottom. Read aloud and listen to the recurring sounds. If you have trouble hearing them try having someone else read them to you. Decide which ones are interesting and fun and which are not. If you haven't at least two different schemes which seem usable write some more, carrying them through the processes in this and frame 126. When you have two or more usable schemes go to frame 128.

128. The stanza and rhyme schemes you like are in units. For instance, the one we have been using is two sestets and a couplet. The progress of any poem we might write with this scheme would have to conform to that pattern. The schematic progression will dictate that the subject matter of the poem progress in a like fashion. Examine the

schemes you like in frame 124. Note the quantity of the successive stanzas (a stanza of six lines has twice the quantity of a three line stanza, etc.)

In frame 125 you have an expanded version of your subjective response. It will have to be broken into parts corresponding to the parts of any stanza pattern. On the two pages following that one write a segmented version of your expanded response to conform to the stanza pattern of each of your tentative schemes. When you have finished go to frame 129.

129. Now think about the material in the various segmented versions of your expanded subjective response you have written in frame 128. Try thinking of each as it will be fit into its corresponding rhyme and stanza scheme. In frame 115 you have written notes concerning the uses of meter. Read through those notes again. Then return to this frame.

You must choose a meter for your poem. Read through the segmented responses and the stanza and rhyme schemes again. Get a tentative idea for each and make a note of it. Then go to frame 130.

130. For each tentative rhyme and stanza scheme which you have retained you now have a segmented version of your subjective response material and a tentative meter. Making the final judgment about which of these combinations to use for your final poem will ultimately rest upon how you feel about what you want to write. It is important that you have as much experience as possible with the material at hand before you make your final decision.

Try the following experiment with each of your combinations. Write the rhyme and meter scheme for each in a vertical fashion as was done with the example in frame 126. Then, either using the rhyming words you used in response to frame 126 or new words, construct one foot of the tentative meter for each line as has been done in the two following examples:

Iambic		Anapest	
1 - A	I'll gloat	1 - A	and I'll gloat
2 - B	the bag	2 - B	with the bag
3 - C	the fun	3 - C	oh the fun
4 - A	I'll coat	4 - A	that I'll coat
5 - B	and brag	5 - B	when I brag
6 - C	when done	6 - C	and am done
7 - D	at fives	7 - D	now at fives
8 - E	I'll click	8 - E	I will click
9 - F	my craft	9 - F	with my craft
10 - D	with knives	10 - D	and with knives

11 - E and flick	11 - E to the flick
12 - F your draft	12 - F of your draft
13 - G so hot	13 - G in my hot
14 - G I'll trot	14 - G pounding trot

When you have finished go on to frame 131.

131. Now you can simulate a whole tentative poem. Use the word "ta" to represent unstressed syllables and the word "TUM" to represent stressed syllables. For instance, were we to simulate the anapest example in frame 130 as having tetrameter lines we would write it out in this fashion:

```
1-A   ta ta TUM ta ta TUM ta ta TUM and I'll gloat
2-B   ta ta TUM ta ta TUM ta ta TUM with the bag
3-C   ta ta TUM ta ta TUM ta ta TUM oh the fun
4-A   ta ta TUM ta ta TUM ta ta TUM that I'll coat
5-B   ta ta TUM ta ta TUM ta ta TUM when I brag
6-C   ta ta TUM ta ta TUM ta ta TUM and am done

7-D   ta ta TUM ta ta TUM ta ta TUM now at fives
8-E   ta ta TUM ta ta TUM ta ta TUM I will click
9-F   ta ta TUM ta ta TUM ta ta TUM with my craft
10-D  ta ta TUM ta ta TUM ta ta TUM and with knives
11-E  ta ta TUM ta ta TUM ta ta TUM to the flick
12-F  ta ta TUM ta ta TUM ta ta TUM of your draft

13-F  ta ta TUM ta ta TUM ta ta TUM in my hot
14-G  ta ta TUM ta ta TUM ta ta TUM pounding trot
```

It is not always necessary to use the same number of feet per line. For instance, an iambic ballad could be set up in alternating tetrameter and trimeter lines:

```
1-A   ta TUM ta TUM ta TUM the horse
2-B      ta TUM ta TUM was fast
3-A   ta TUM ta TUM ta TUM a course
4-B      ta TUM ta TUM came last

5-C   ta TUM ta TUM ta TUM slow brown
6-D      ta TUM ta TUM the black
7-C   ta TUM ta TUM ta TUM our town
8-D      ta TUM ta TUM off track

9-E   ta TUM ta TUM ta TUM his face
10-F     ta TUM ta TUM the truck
11-E  ta TUM ta TUM ta TUM a race
12-F     ta TUM ta TUM with luck
```

Experiment with line lengths for the various tentative schemes you are still considering. When you have finished go on to frame 132.

132. Each of your simulated poems in frame 131 corresponds to a segmented version of your subjective responses in frame 128. Now consider each pair carefully. Which segmented response and simulation pair seem to go together best? Choose the pair which shows the best promise of giving appropriate expression to the ideas and images which will become your poem. Copy the segmented response and the simulated poem. When you write out the simulated poem do not include the rhyming words. Replace them with the appropriate use of the words "ta" and "TUM." Indicate the rhyme scheme by prefacing each line with a letter of the alphabet as appropriate. When you have finished go to frame 133.

133. You have now chosen the material and form of your poem. Before beginning to actually write it re-examine the material. Look for actual or suggested metaphor and simile. Try to develop those metaphor and simile. Decide what their potential value may be and how they might be used in your poem. Actually write out some of it. When you have finished go on to frame 134.

134. You are writing a poem which must conform to a preconceived pattern. Lay out a page in the manner shown below, altering it to represent the particular poem you will write. (the example given below is derived from the first example simulation of frame 131.)

(Enter here the meter and foot requirements): ANAPESTIC TETRAMETER ta ta TUM ta ta TUM, etc. (Enter here a one line simulation of the meter and foot):

(In a vertical line indicate the line numbers and rhyme requirements)

1-A
2-B
3-C
4-A
5-B
6-C
7-D
8-E
9-F
10-D
11-E
12-F
13-G
14-G

(leave spaces to indicate stanza breaks)

Utilize the entire page so that you will have ample space for the writing you will do. When you have finished go to frame 135.

135. As you write you will frequently discover the requirements of rhyme preventing your proceeding in the direction you had anticipated. When this happens you will have to either make considerable changes in that portion of your poem already drafted or you will have to alter the subject matter of your poem. Probably some middle road is the one to follow. Enter a first line in the appropriate spot on the following page and continue writing until you have a complete draft of your poem conforming to the rhyme, meter, stanza and line requirements. In a sense it is nothing more than filling in the blanks. You won't find it as simple as that sounds, however. When you have finished go to frame 136.

136. Go through the poem you have written on the preceding page. Examine it for trite phrases, trite ideas and trite rhymes. Indicate these by drawing a line through them. Then go to frame 137.

137. By annotating, rewrite the trite parts of your poem on the preceding page. Then go on to frame 138.

138. Look for and indicate all uses of assonance, consonance, alliteration and onomatopoeia by circling them. Then go to frame 139.

139. Find all uses of metaphor and simile. Indicate these by underlining them. Then go to frame 140.

140. Frequently rhymes will happen by accident. Examine your poem for any unintended internal rhymes. Sometimes these rhymes enhance your poem. Most often they will mar it. Consider any you find. Cross out those which are not decidedly beneficial. Replace them with words which do not rhyme. Then go to frame 141.

141. Consider any assonance, consonance, alliteration or onomatopoeia you have indicated by circling. Remove any which are not obviously beneficial by rewriting. Then go on to frame 142.

142. Consider the metaphor and simile you have underlined. Rewrite them when necessary to make them better function within the poem. Then go to frame 143.

143. Examine the meter and rhyme of your poem. In rewriting you will probably have altered it in places. Wherever the meter or rhyme have been damaged restore them by rewriting. Then go to frame 144.

144. Make a clean copy of your poem. Then go to frame 145.

145. What is your poem about? Base your judgment only on the version you have copied onto the preceding page. (It is no longer about what the subjective response was about.) Read carefully through your poem. Underline those parts which do not seem to conform to the general theme. Then go to frame 146.

146. Does your poem proceed logically and smoothly through its various parts? Mark those parts which do not aid in the progressive development by drawing a line through each of the lines involved. Then go to frame 147.

147. Rewrite the questionable parts of your poem you have indicated by drawing a line through them or by underlining. When you have finished go to frame 148.

148. Restore any damage you may have done to the rhyme or meter. Then go to frame 149.

149. Make a clean copy of your poem. Then go to frame 150.

150. Now re-examine your poem. Are there any improvements you can make? Experiment with improving:

a. metaphor
b. simile
c. assonance
d. consonance
e. alliteration
f. onomatopoeia
g. meaning
h. progression
i. imagery
j. the effectiveness of the rhyme.

Improve any other aspects of the poem you can think of by rewriting the version in your workbook. When you have finished go on to frame 151.

151. Have other students read your poem. Find out what they think about it. Whenever you feel a valid criticism has been made note it marginally to your poem in your workbook. When you have finished go on to frame 152.

152. Rewrite your poem to improve those aspects of it you feel have been justly criticized. Then go on to frame 153.

153. Now examine your poem for any damage you may have done to the meter, rhyme or any other aspect of it while doing the rewriting in response to frame 152. Then go to frame 154.

154. Now read through your poem a last time. Are there any improvements you can make? If so, make them now. Then go to frame 155.

155. Make a clean copy of your poem. Then go to frame 156.

156. Choose another set of ideas from frame 9. Write another rhymed and metered poem of at least 14 lines. This time refer to the instructions in frames 124 through 155 only when you cannot think what to do next. Study them first, then try to complete the poem without referring to any of the preceding frames in this section. When you have finished you have completed the program.

APPENDIX 3

POETRY OBJECTIVE SCORING SYSTEM

POETRY OBJECTIVE SCORING SYSTEM

1. 0-10 points, dependent upon whether all parts contribute to the poems. In other words, do all phrases, ideas, images, etc. fit into the context?

2. 0-10 points, dependent upon whether all parts are consistent with what the poem is all about.

3. 0-10 points, dependent upon whether the language of all parts are pleasing to read or listen to. That is do the poems contain rhymes, rhythm, alliterations, etc.

4. 0-10 points, dependent upon whether ideas avoid being trite.

5. 0-10, if poem utilizes effective images. That is, were there attempts to create imagery by the use of some poetic techniques such as metaphors, similes, unusual words, analogies, etc.

6. 0-10 points, dependent upon whether the poem is a continuous whole in which all parts fit together easily.

7. 0-20 points, dependent upon the type of response evoked in the reader.

APPENDIX 4

Q-SORT TECHNIQUE FOR IMPRESSIONISTIC JUDGMENTS OF POEMS

INSTRUCTIONS FOR Q-SORT TECHNIQUE

Nine sheets of paper, each marked from one to nine, designated the nine categories from least preferred to most preferred. The instructions to the judges were as follows: "You have nine categories or piles in which the poems must be placed. There is a specific number of poems which must be placed into each pile. The number of poems from the first to the last categories, respectively, are 5, 10, 15, 20, 20, 20, 15, 10, and 5. Each sheet of paper has the category number and the number of poems to be placed in each. When you start sorting the poems, you must start with the two extremes; that is, you must work with categories 1 and 9. Next you must work with categories 2 and 8 and so on until all the poems have been sorted. When you start, read through all the poems and pick out the five poems you most prefer and the five poems you least prefer and place them in the first and last piles. When you start with the next two categories, 2 and 8, read through the poems again and pick out 10 poems which you least prefer and 10 poems which you most prefer, and so on. Is that clear? Remember that you must read through the remaining poems to pick out the next set of poems to be placed in the piles."

The following instructions were given when each judge had finished sorting the poems. "Now that you have finished sorting the poems, would you rate the poems? The poems can be rated on any range from very poor to excellent. Here is a copy of the rating scale which you can use."

The rating scale contained six intervals. The intervals were from one to six as follows: very poor, poor, fair, good, very good, and excellent. The judges were again told that the poems could be rated from very poor to poor, poor to good, or in any other range.